

# THE JOURNAL OF MEDICAL EDUCATION

OFFICIAL PUBLICATION OF  
THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES



March 1956 • VOLUME 31 • NUMBER 3

## IN TWO PARTS—PART ONE

- Preventive Medicine and the Colorado Springs  
Conference.....Hubbard, Clark
- The Training of Psychiatrists.....John C. Whitehorn
- Responsibility of the University in  
American Anesthesia.....Francis D. Moore
- Patients' Attitudes in a Medical Care Program.....Morris Weinstein
- External Examinations in the Medical Sciences.....Edward M. Bridge
- Postgraduate Teaching and Its Integration  
in Medical Practice.....J. Groen

*New (2nd) Edition—Bland's*  
*Clinical Recognition and Management of*  
*Disturbances of Body Fluids*  
see SAUNDERS ADVERTISEMENT just inside

—Just Published—

## NEW 42nd Edition McDOWALL Handbook of PHYSIOLOGY and BIOCHEMISTRY

By R. J. S. McDOWALL, M.D., D.Sc., M.R.C.P. (Lond.), F.R.C.P. (Edin.),  
Professor of Physiology, University of London, King's College.

In his complete revision of this famous classic, Dr. McDowall incorporates countless new facts by completely rewriting 10 sections and making extensive alterations in almost all others. Completely rewritten sections in the New Forty-Second Edition include the Vasomotor System, Lymph, Artificial Respiration, Chemistry, Muscle Contraction, the Nerve Impulses, Effects of Cold, Adrenal Cortex, Control of Urine Secretion, and Intermediate Metabolism. Almost all other sections have been deeply altered. So many of the old illustrations have been replaced that the book presents an entirely new appearance.

759 pages, 6 x 9, 317 illustrations (18 in full color) ..... \$9.00

**MORRIS—Human Anatomy, Eleventh Edition** This distinguished anatomy text edited by Dr. Schaeffer, is now in its eleventh. In this famous work, variations are given as they appear in the living body and a special attempt is made to help the student by comparisons (particularly by x-rays) of the cadaver anatomy. 1718 pages, more than 1220 illustrations, 8 plates of x-rays . . . . . \$16.50

**TOBIN—Shearer's Manual of Human Dissection** Designed to be an autonomous unit which does not have to be used in conjunction with, or with reference to, any specific descriptive text, and can be used with any dissection sequence. 287 pages, 79 illustrations . . . . . \$6.00

**HOUSSAY et al—Human Physiology, Second Edition** Presents all the aspects of human physiology in both their chemical and physical relationships. Incorporated in this revision the latest data available in the fields of nutrition, carbohydrate metabolism, endocrine glands, sexual physiology, and electrical activity of the heart. 1169 pages, 504 illustrations . . . . . \$12.00

**BOYDEN—Segmental Anatomy of the Lungs** *A study of the Patterns of the Segmental Bronchi and Related Pulmonary Vessels.* The first comprehensive study to show the relation of arteries and veins to segmental and subsegmental bronchi and to employ a uniform system of naming and numbering related bronchi, arteries, and veins. "... the descriptive anatomist's answer to the surgeon's plea for a reliable map to guide him in the dissection of segmental lung anatomy."—*Surgery, Gynecology, and Obstetrics*. 276 pages, 137 illustrations (some in color) . . . . . \$15.00

**WHITE et al—Principles of Biochemistry** Recognizing the importance of medicine for an understanding of body fluids, this book is an up-to-date reference for physicians, medical students and others concerned with mammalian biochemistry. 1114 pages, 143 illustrations . . . . . \$15.00

### For Board Reviews—Clarke and Del Guercio UROLOGY

Here, in a book brief enough to be read during the urology course or to be used in board reviews, are the essentials of urology—presented as an area within the study of general biology and medicine, rather than as a specialty. This new book will also be particularly valuable as a teaching text because of its unique presentation which makes free use of diagrams and pictures in place of detailed written descriptions. An important feature of the book is its collection of X-rays and photomicrographs from typical case disorders, accompanied by the patient's histories. Helpful for students will be the line drawings, which present some of the more important anatomical and surgical principles in urology.

250 pages, 6 x 9, 162 illustrations ..... \$6.50



**BLAKISTON DIVISION, MCGRAW-HILL BOOK COMPANY, INC.**

330 WEST 42nd STREET, NEW YORK 36, NEW YORK

## MEMORANDUM

To: *Teachers of Medicine*

From: *Saunders*

Re: *A New Book & 3 New Editions*

### **DIGGS —**

#### **Morphology of Human Blood Cells**

*New*—Brilliantly illustrated, this manual demonstrates morphological changes in cellular constituents of the blood under various disease circumstances. Pathologic features of the disease involved, and the progressive changes in the blood picture both before and after are fully discussed. The technique of preparing blood specimens is clearly described.

By L. W. DIGGS, M.D., B.A., M.A., Professor of Medicine and Director of Medical Laboratories, University of Tennessee and City of Memphis Hospitals. Consultant in Hematology, Armed Forces Institute of Pathology, Washington, D.C. With the assistance of DOROTHY STERN, Instructor, Memphis Academy of Arts; and ANN BELL, B.A., Instructor in Medicine, University of Tennessee. About 188 pages, 8" x 8 $\frac{3}{4}$ ", with 111 illustrations, 32 in color. *New—Just Ready.*

### **BLAND —**

#### **Clinical Recognition and Management of Disturbances of Body Fluids**

*New (2nd) Edition*—Dr. Bland brings you a comprehensive picture of just how to interpret fluid and electrolyte abnormalities. New concepts are included on renal regulation of hydrogen ion excretion and maintenance of volume and concentration of body fluids. A handy glossary explains abbreviations.

By JOHN H. BLAND, M.D., Assistant Professor of Medicine, University of Vermont College of Medicine. 550 pages, 7" x 10", with about 108 illustrations. *New (2nd) Edition—Just Ready.*

### **MAJOR and DELP — Physical Diagnosis**

*New (5th) Edition*—This text provides the student with a sound and explicit knowledge of the method of examining the patient for the presence of disease or abnormality. It gives the clinical meaning of signs and stresses their underlying causes. Many new cases and illustrations have been added and the out-moded ones deleted.

By RALPH H. MAJOR, M.D., Professor of Medicine and of the History of Medicine, University of Kansas; and MAHLON H. DELP, M.D., Professor of Medicine, University of Kansas. About 497 pages, 6 $\frac{3}{4}$ " x 10", with about 531 illustrations. *New (5th) Edition—Ready in June 1956.*

### **SODEMAN — Pathologic Physiology**

*New (2nd) Edition*—Brought fully up-to-date, this book provides answers to the questions of how and why disease symptoms occur. New chapters have been added on *Genetics, Growth and Neoplasia* and on the *Nervous System*. The entire book has been thoroughly revised to bring it in line with modern concepts.

By WILLIAM A. SODEMAN, M.D., F.A.C.P., Professor of Medicine and Chairman of the Department of Medicine, School of Medicine, University of Missouri, Columbia, Missouri. 963 pages, 6 $\frac{1}{4}$ " x 9 $\frac{3}{4}$ " with 173 illustrations. \$13.00. *New (2nd) Edition.*

**W. B. SAUNDERS COMPANY, West Washington Square, Philadelphia 5**

# Table of Contents

VOL. 31

MARCH 1956

No. 3

## ARTICLES

- Preventive Medicine and the  
Colorado Springs Conference  
—John P. Hubbard and Duncan W. Clark..... 151

- The Training of Psychiatrists  
—John C. Whitehorn..... 157

- Responsibility of the University  
in American Anesthesia  
—Francis D. Moore..... 165

- Patients' Attitudes in a  
Medical Care Program  
—Morris Weinstein..... 168

- External Examinations in Medical Sciences  
—Edward M. Bridge..... 174

- Postgraduate Teaching and Its Integration  
in Medical Practice  
—J. Groen..... 181

- EDITORIALS AND COMMENTS..... 188

- NEWS DIGEST..... 192

- College Briefs..... 196

- AUDIOVISUAL NEWS..... 200

- BOOK REVIEWS..... 206

- PERSONNEL EXCHANGE..... 214

- Association Officers, Staff, Committees..... V

- Calendar of Meetings..... X

- Advertisers Index..... X

II

## The Journal of MEDICAL EDUCATION



Official publication of the Association of American Medical Colleges, 185 N. Wabash Ave., Chicago 1.

The Journal of MEDICAL EDUCATION is owned and published monthly by the Association of American Medical Colleges, 185 N. Wabash Ave., Chicago 1; Phone, State 2-8878. Entered as second class matter January 17, 1930, at the Post Office, Chicago, Ill., under the Act of March 3, 1879.

**EDITORIAL BOARD:** John Z. Bowers, chairman, Wisconsin; Stanley E. Bradley, Columbia; T. Hale Ham, Western Reserve; Julius H. Camroe Jr., Pennsylvania; Russell L. Holman, Louisiana State; Erwin A. Ackerknecht, Wisconsin (consultant); Dean F. Smiley, secretary.

**STAFF:** Editor, Dean F. Smiley; Assistant Editor, Barbara M. Peterson; Editorial Assistant, Lucile Smith.

**CORRESPONDENTS:** Sidney C. True-love, England; Prem Wahl, India; Yoshio Kusama, Japan.

**EDITORIAL POLICY:** Articles ordinarily will be limited to 5,000 words in length. Articles longer than this usually will require treatment as a supplement and necessitate a publication subsidy. Responsibility for signed articles and editorials is not assumed by the Association's officers or the Journal's Editorial Board but by the individual author.

**SUBSCRIPTION RATES:** \$7 per year, \$1 per single copy; foreign \$8 per year; \$1.25 per single copy. Change of Address: Notifications of changes of address should include the old address wrapper and the new address.

**COPY DEADLINE:** Copy for typesetting must be in by the 1st and plates by the 10th of the month preceding publication.

**ADVERTISING:** Business Manager, Helen M. McBride, Journal of Medical Education, 185 N. Wabash Ave., Chicago 1, Ill.; State 2-8878.

**REPRINTS:** Each author routinely receives 25 copies of his article promptly after publication. Additional reprints may be purchased from the Journal in quantities of 100, and in multiples of hundreds at a price depending on the length of the article.

Copyright: ©March, 1956, by the Association of American Medical Colleges.

Printed in U.S.A.

Journal of MEDICAL EDUCATION



YATER'S

# FUNDAMENTALS OF INTERNAL MEDICINE

BY WALLACE M. YATER, M.D., F.A.C.P.

WITH WILLIAM FRANCIS OLIVER, M.D., A.A.C.P.

AND 21 CONTRIBUTING AUTHORITIES AS FOLLOWS

## QUOTES FROM THE REVIEWS

•  
"THE BEST REVIEW  
OF MEDICINE THAT  
I HAVE SEEN"

•  
"WILL BE ESPECIALLY  
WELCOMED BY THE THIRD  
YEAR MEDICAL STUDENT  
WHO IS OVER-  
WHELMED BY MORE  
EXHAUSTIVE WORKS"

•  
"MUCH 'MEAT' IN FEW  
WORDS WITHOUT LOSS OF  
COHERENCY, CLARITY  
OR FACTUAL DETAIL"

•  
"REPLETE WITH  
ESSENTIAL KNOWLEDGE  
OF HOW TO TREAT  
THE SICK"

•  
"WILL STIMULATE  
AND HELP PHYSICIANS  
YOUNG AND OLD"

•  
"ALMOST EVERY BOOK  
LETS YOU DOWN IN  
SOME RESPECT. THIS  
ONE DOES NOT"

•  
"EXTREMELY USEFUL  
TO ANYONE WHO  
KEEPS IT HANDY"

Garnet W. Ault  
Joseph M. Barker  
Grafton Tyler Brown  
Edward E. Cummings  
William H. Hanna  
Wallace E. Harrell  
James M. Hundley

Hugh H. Hussey, Jr.  
Paul F. Jacquet, Jr.  
Francis R. Keating, Jr.  
Edwin J. Kapler  
Theodore Koppanyi  
Laurence H. Kyle  
William J. Martin

Isidore Rodin  
Sanford M. Rosenthal  
Frederick C. Schreiber  
William H. Seabell, Jr.  
Walter O. Teichmann  
W. E. Wellman  
Jonathan M. Williams

This widely accepted text owes its success to the ability of the author and his contributors to screen out non-essentials and focus the reader's attention upon the basic and practical fundamentals of internal medicine.

Yater's FUNDAMENTALS is recognized as an effective and dependable evaluation and digest of present-day knowledge regarding the understanding, recognition and treatment of those diseases and syndromes considered as being in the wide field of internal medicine.

Each subject is covered concisely yet clearly. There is no padding, almost no repetition, and little is included in the way of theoretical aspects or controversial material.

The discussion of each subject is orderly with brief introductory paragraphs covering basic physiology and pathology before presenting main discussions of symptoms, diagnosis, differential diagnosis, treatment, and general patient care. There are many clarifying and time saving tables of differential diagnosis, succinct diagnostic summaries and illustrations which were selected with great care to serve as helpful diagnostic aids.

In the section on diseases of the heart the material on electrocardiography is again contributed by Joseph M. Barker, the author of THE UNIPOLAR ELECTROCARDIOGRAM.

---

4TH EDITION • 1954 • 1280 PAGES • 161 ILLUS. • \$13.50

---

## APPLETON-CENTURY-CROFTS, INC.

(Publishers of THE NEW CENTURY CYCLOPEDIA OF NAMES)

35 WEST 32nd STREET, NEW YORK 1, N. Y.



**Enjoy new ease  
of use**

## **NEW Bausch & Lomb INSTRUMENT SET**



**Your new diagnostic set—  
a pleasure to own, an inspiration to use.**  
Completely redesigned, it has the newest in die-cast aluminum heads, positive-locking bayonet type handle connections, brilliant flicker-proof lighting from pre-focused lamps, and positive thumb-tip control of light intensity. Weight, balance and finish—all contribute to a new luxury "feel". Your supplier will show it to you—or write: Bausch & Lomb Optical Co., Rochester 2, New York.

# **BAUSCH & LOMB**



# Association of American Medical Colleges

## OFFICERS OF THE ASSOCIATION 1955-56

### Officers and Members of Executive Council

**President and Chairman of Council:**  
**ROBERT A. MOORE**.....Pittsburgh  
**President-Elect: JOHN B. YOUNG**  
 .....Vanderbilt  
**Vice-President: HAROLD S. DIEHL**.....Minnesota  
**Treasurer: STOCKTON KIMBALL**.....Buffalo  
**Immediate Past President: VERNON W. LIPPARD**  
 .....Yale  
**Secretary: DEAN F. SMILEY**.....AAMC  
**GEORGE N. AAGAARD**.....Washington (Seattle)  
**WALTER R. BERRYHILL**.....North Carolina  
**LOWELL T. COGGERHALL**.....U. of Chicago  
**THOMAS H. HUNTER**.....U. of Virginia  
**JOHN Z. BOWERS**.....Wisconsin  
**JOHN F. SHEEHAN**.....Stritch (Loyola)

### Staff

**DEAN F. SMILEY**, Secretary; Editor, Medical Education  
**J. EDWIN FOSTER**, Director, Medical Audio-Visual Institute  
**HELEN H. GEE**, Director of Research  
**WILLIAM N. HUBBARD JR.**, Associate Secretary

### Committees of the Association 1955-56

(Chairmen listed first—Affiliation listed in italics)

#### AUDIOVISUAL EDUCATION

**Walter A. Bloedorn**, Geo. Washington  
**A. J. Gill**, Northwestern  
**Roscoe L. Pullen**, Missouri  
**William W. Frye**, Louisiana  
**W. Clarke Wescoe**, Kansas  
**William J. Darby**, Vanderbilt  
**Clarence E. de la Chapelle**, NYU, P.G.  
**Tom Jones**, Consultant, Illinois Emeritus

#### BORDEN AWARD

**Joseph Markee**, Duke  
**Arnold Rich**, Johns Hopkins  
**Elmer H. Stolz**, Rochester  
**Windsor C. Cutting**, Stanford  
**Oliver Lowry**, Washington U.

#### CONTINUATION EDUCATION

**Samuel Proger**, Tufts  
**James W. Colbert**, St. Louis  
**Theodore H. Harwood**, North Dakota  
**Robert Howard**, Minnesota  
**Frank Roberts**, Tennessee  
**Daniel T. Rolfe**, Meharry  
**Thomas Sternberg**, UCLA  
**Grant Taylor**, U. of Texas, P.G.  
**Milton Terris**, Buffalo

#### EDITORIAL BOARD

**John Z. Bowers**, Wisconsin  
**Stanley E. Bradley**, Columbia  
**T. Hale Ham**, Western Reserve

**Julius H. Comroe**, Pennsylvania (Grad)  
**Russell L. Holman**, Louisiana  
**Erwin H. Ackerknecht**, Consultant, Wisconsin  
**Dean F. Smiley**, AAMC

#### FINANCING MEDICAL EDUCATION

**Joseph C. Hinsey**, New York Hosp.—Cornell  
**Walter A. Bloedorn**, Geo. Washington  
**Donald G. Anderson**, Rochester  
**Stanley E. Dorst**, Cincinnati  
**Vernon W. Lippard**, Yale  
**Norman Topping**, Pennsylvania  
**John B. Young**, Vanderbilt

#### INTERNATIONAL RELATIONS IN MEDICAL EDUCATION

**Richard H. Young**, Northwestern  
**M. E. Lapham**, Tulane  
**E. Grey Dimond**, Kansas  
**Walter E. Macpherson**, C.M.E.  
**Norman B. Nelson**, Iowa  
**Jean A. Curran**, SUNY  
**R. Hugh Wood**, Emory  
**Francis Scott Smyth**, U. of Cal. (S.F.)  
**Elizabeth T. Lam**, Consultant, Comm. on Internatl. Exch. of Persons  
**Harold H. Loucks**, Consultant, China Medical Board of New York, Inc.  
**Myron Wegman**, Consultant, Pan American Sanitary Bureau

#### INTERNSHIPS, RESIDENCIES AND GRADUATE MEDICAL EDUCATION

**E. Hugh Luckey**, Cornell  
**John Detrick**, Jefferson  
**Howard Armstrong**, Illinois  
**D. W. E. Baird**, Oregon  
**F. Douglas Lawraon**, Arkansas  
**Richard W. Vilter**, Cincinnati  
**George A. Wolf Jr.**, Vermont  
**Francis R. Manlove**, Colorado  
**R. D. Pruitt**, Mayo Foundation

#### LICENSURE PROBLEMS

**J. Murray Kinsman**, Louisville  
**John Hirschboeck**, Marquette  
**Gordon E. Goodhart**, U. of S. Cal.  
**Arthur W. Wright**, Albany  
**Wayne L. Whitaker**, Michigan  
**James E. McCormack**, Columbia

#### MEDICAL CARE PLANS

**John F. Sheehan**, Loyola  
**Frank R. Bradley**, Washington U.  
**R. H. Kampmeier**, Vanderbilt  
**Henry B. Mulholland**, Virginia  
**Albert Snoke**, Yale

#### PLANNING FOR NATIONAL EMERGENCY

**Stanley W. Olson**, Baylor  
**Mark R. Everett**, Oklahoma  
**Thomas R. Forbes**, Yale  
**Stockton Kimball**, Buffalo  
**John B. Truslow**, Med. Coll. of Virginia

(Committees continued on page 6)

(Committees continued from page 5)

#### PROGRAM

Robert A. Moore, Pittsburgh  
John B. Youmans, Vanderbilt  
Harold S. Diehl, Minnesota  
Dean F. Smiley, Secretary

#### PUBLIC INFORMATION

John L. Caughey, Western Reserve  
Francis M. Forster, Georgetown  
John D. Van Nuys, Indiana  
Harold C. Wiggers, Albany  
Joseph B. Kelly, Consultant, Johns Hopkins  
Milton Murray, Consultant, Medical Evangelists  
Ralph Rohweder, Consultant, Nat'l. Soc. for Med. Research  
Raymond O. Torr, Consultant, Nat'l Fund for Med. Educ.

#### EDUCATIONAL RESEARCH AND SERVICES

George Packer Berry, Harvard  
D. Bailey Calvin, Texas  
Stanley E. Dorst, Cincinnati  
Thomas Hunter, U. of Virginia  
Carlyle Jacobsen, SUNY  
Vernon W. Lippard, Yale  
W. Clarke Wescoe, Kansas  
William R. Willard, SUNY, Syracuse  
Robert A. Moore, Pittsburgh, ex officio  
Helen H. Gee, Secretary

#### SUBCOMMITTEE ON EVALUATION AND MEASUREMENT

Thomas Hunter, U. of Virginia  
John T. Cowles, Pittsburgh, vice chairman  
George Packer Berry, Harvard  
Carlyle Jacobsen, SUNY  
William Schofield, Minnesota  
Helen H. Gee, AAMC

#### VETERANS ADMINISTRATION MEDICAL SCHOOL RELATIONSHIPS

Joseph Hayman, Tufts  
George A. Bennett, Jefferson  
Robert C. Berson, Alabama  
Gordon H. Scott, Wayne  
Harold Hinman, Puerto Rico

#### Representatives to Related Organizations

##### ADVISORY BOARD FOR MEDICAL SPECIALTIES

Stanley E. Dorst, Cincinnati  
John B. Youmans, Vanderbilt

##### ADVISORY COUNCIL FOR THE NATIONAL FUND FOR MEDICAL EDUCATION

Joseph C. Hinsey, New York Hosp.—Cornell  
John B. Youmans, Vanderbilt  
Vernon W. Lippard, Yale

##### ADVISORY COUNCIL ON MEDICAL EDUCATION

Robert A. Moore, Pittsburgh  
John B. Youmans, Vanderbilt

##### AMERICAN COUNCIL ON EDUCATION

Marion Fay, Women's Medical Coll.  
William Stone, Maryland

Edward J. Van Lier, W. Va.  
John T. Cuttino, Med. Coll. of S. C.  
George A. Bennett, Jefferson  
Robert S. Jason, Howard

#### FEDERATION OF STATE MEDICAL BOARDS

J. Murray Kinsman, Louisville

#### FELLOWSHIPS SELECTION BOARD (WHO)

Walter A. Bloedorn, George Washington

#### NATIONAL INTERN MATCHING PROGRAM, INC.

E. Hugh Luckey, Cornell  
George A. Wolf Jr., Vermont  
Lowell T. Coggeshall, U. of Chicago

#### JOINT COMMITTEE ON MEDICAL EDUCATION IN TIME OF NATIONAL EMERGENCY

Stockton Kimball, Buffalo  
Mark R. Everett, Oklahoma  
Stanley W. Olson, Baylor  
Dean F. Smiley, AAMC

#### LIAISON COMMITTEE WITH COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Vernon W. Lippard, Yale  
Robert A. Moore, Pittsburgh  
John B. Youmans, Vanderbilt  
Harold S. Diehl, Minnesota  
Dean F. Smiley, AAMC

#### MEDICAL ADVISORY COMMITTEE ON INSTITUTE OF INTERNATIONAL EDUCATION

Duncan W. Clark, SUNY, (Brooklyn)  
Lawrence Hanlon, Cornell  
Ralph E. Snyder, N.Y. Med. Coll.

#### NATIONAL BOARD OF MEDICAL EXAMINERS

John Deltrick, Jefferson  
Robert A. Moore, Pittsburgh  
B. O. Raulston, Southern California, Emeritus

#### NATIONAL HEALTH COUNCIL

Jean A. Curran, SUNY, (Brooklyn)  
Aura Severinghaus, Columbia  
John McK. Mitchell, Pennsylvania

#### SUBCOMMITTEE ON MEDICAL EDUCATION FOR NATIONAL DEFENSE

Stanley W. Olson, Baylor  
George V. Byfield, Illinois  
Lawrence Hanlon, Cornell  
Stockton Kimball, Buffalo  
John B. Youmans, Vanderbilt  
John Truslow, Med. Coll. of Va.  
William C. Moloney, Tufts

#### COOPERATING COMMITTEE ON GRADUATES OF FOREIGN MEDICAL SCHOOLS

John McK. Mitchell, Pennsylvania  
J. Murray Kinsman, Louisville  
Wayne L. Whitaker, Michigan

#### MEMBER OF INTERNSHIP REVIEW BOARD OF COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

John Deltrick, Jefferson

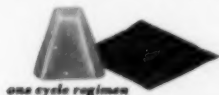
**89.9% of patients  
free from trichomoniasis  
in one menstrual cycle**

*This receptionist's symptoms of local itching and burning are gone, due to her doctor's thorough powder insufflation and her own use of suppositories at home.*

- *many cases refractory* to previous therapies responded to **TRICOFURON** combined therapy in 4 clinical studies of 108 patients.\* Cure rate was 89.9%
- *advantages:* contains a specific, trichomonocidal nitrofurantoin. Kills many secondary invaders but permits essential Döderlein's bacillus to exist. Effective in blood, pus and vaginal debris
- *office treatment:* insufflate **TRICOFURON** Powder twice the first week and once a week thereafter
- *home treatment:* first week—the patient inserts one **TRICOFURON** Suppository each morning and one each night at bedtime. Thereafter: one a day—a second if needed

Suppositories contain 0.25% Furazolidone (brand of furazolidone) in a water-miscible base. Hermetically sealed in green foil. Box of 12. Powder contains 0.5% Furazolidone in water-soluble base composed of lactose, dextrose and citric acid. Bottle of 30 Gm.

\*Personal Communications to Medical Department, Eaton Laboratories. Detailed information on request.



**TRICOFURON**

**EATON LABORATORIES, Norwich, N. Y.**



VAGINAL SUPPOSITORIES AND POWDER



**NITROFURANS**

a new class of antimicrobials  
which actives non-sulfas

DATA ON EFFECTIVENESS of

## MALT SOUP *Extract*

FOR CORRECTING CONSTIPATION OF INFANTS



### MOST LAXATIVE OF ALL THE MALT SUGARS — JEANS, RAND AND BLAKE

"... and 'malt soup extract' is the most laxative of all the malt sugars . . . This severe type of constipation has been designated fat constipation . . . Often in this connection it is desirable to use the more laxative varieties of sugar. The liquid-malt preparations, such as malt soup extract, are useful."

Jeans, P. C., Rand, W., and Blake, F.:  
Essentials of Pediatrics. Philadelphia,  
J. B. Lippincott Co., ed. 4, 1946, pp. 509, 536.

### OFTEN AN EXCELLENT REMEDY—PORTER AND CARTER

"For the milder types of constipation, the malt soup extract . . . may be added directly to the feedings,  $\frac{1}{2}$  dram to each of 2 or 3 bottles daily, according to the needs of the child . . . The same sort of constipation is one of the most frequent troubles of the breast-fed. For these babies, too, malt soup extract is often an excellent remedy. One-half teaspoonful dissolved in  $\frac{1}{2}$  ounce of water, and flavored with a few drops of orange juice is to be given before nursings. Usually, if it be given 2 or 3 times a day, the constipation will be corrected."

Porter, L., and Carter, W. E.:  
Management of the Sick Infant and Child. St. Louis,  
The C. V. Mosby Co., ed. 6, 1942, p. 93.



### Borchardt MALT SOUP *Extract*

**What It Is:** Specially processed malt extract neutralized with potassium carbonate.

**How It Works:** Promotes aciduric bacteria in colon. Grain extractives and potassium ions contribute to gentle laxative effect.

**Dose:** Infants: 1 to 2 Tbs. in day's feeding. **Breast-fed Infants:** 1 to 2 Tsp. in water before nursings. **Children:** 1 to 2 Tbs. half hour before breakfast and at bedtime. Makes delicious "malted" drink.

8 oz. and 16 oz. jars • Samples and literature on request

**BORCHARDT MALT EXTRACT CO. • 217 N. Wolcott Ave., Chicago 12, Ill.**





Ortho's

MOST SPERMICIDAL CONTRACEPTIVE

Delfen

VAGINAL CREAM

HAS THE...

highest concentration  
of a new most potent,  
nontoxic spermicide



#### effective

The action of DELFEN vaginal cream is almost exclusively chemical. So potent is this new chemical spermicidal agent that DELFEN vaginal cream is first by far in three leading tests of spermicidal potency.\*

\*Rinder-Gamson, Elson and Zone tests.

#### acceptable

Clinical experience emphasizes the aesthetic acceptability of DELFEN vaginal cream. It is snow white and has a pleasing consistency. It is emollient, not unduly lubricating and does not leak. These features, plus the fact that it is nonirritating, evoke favorable response from patients.





for  
specific  
Cough  
suppressant  
effect

Ten milligrams of Romilar equal  
fifteen milligrams of codeine.

Yet Romilar is non-narcotic -  
does not cause nausea, constipation,  
drowsiness, or addiction.

Tablets; Syrup; Expectorant (with  
Ammonium Hydrochloride).

Romilar® Hydrobromide - Brand of dextromethorphan hydrobromide

Roche

Original Research in Medicine and Chemistry

# Calendar of Meetings

## ASSOCIATION OF AMERICAN MEDICAL COLLEGES 67th Annual Meeting, November 12-14, 1956 Broadmoor Hotel, Colorado Springs, Colo.

American Medical Association Annual Meeting—June 11-15; Chicago, Ill.

American Association of Anatomists—April 4-6; Milwaukee, Wis.

American Heart Association Annual Meeting and Scientific Sessions—Oct. 27-31; Cincinnati, O.

American Goiter Association—May 3, 4 and 5; Drake Hotel, Chicago, Ill.

National Society for Prevention of Blindness—March 26-28; Palmer House, Chicago, Ill.

International Professional Union of Gynecologists and Obstetricians—Sept. 28-29; Madrid, Spain.

Conference of International Union for Health Education of the Public—April 27-May 5; Rome, Italy.

## Index to Advertisers

|                                      |                        |
|--------------------------------------|------------------------|
| AAMC                                 | Inside Back Cover, 208 |
| Appleton-Century-Crofts, Inc.        | III                    |
| Armour Laboratories                  | 211                    |
| Bausch & Lomb Optical Co.            | IV                     |
| Blakiston Div., McGraw-Hill Book Co. | IV                     |
|                                      | Inside Front Cover     |
| Borchardt Malt Extract Co.           | VIII                   |
| Ciba                                 | XIII                   |
| Eaton Laboratories                   | VII                    |
| Hoffman-LaRoche, Inc.                | IX                     |

|                                    |                 |
|------------------------------------|-----------------|
| Lakeside Laboratories              | XIV             |
| Lea & Febiger                      | 207             |
| Macmillan Co.                      | 213             |
| C. V. Mosby                        | 210             |
| Ortho Pharmaceutical Co.           | between pp. 8-9 |
| Parke, Davis & Co.                 | XII             |
| Smith, Kline & French Laboratories | XI              |
| W. B. Saunders Co.                 | Front Cover, I  |
| Taylor Instrument Co.              | XII             |
| Woodward Medical Personnel Bureau  | 214             |

## Aei Quoque Auxilio Sunt

**T**HE NATIONAL DAIRY COUNCIL is a nonprofit nutrition research, nutrition education and public relations organization serving the entire dairy industry. It was organized in 1915 by dairy industry officials, with the assistance of leading health authorities and nutritionists. It enlists the support of opinion-influencing leaders and groups on the national level, as well as in 83 major local markets in 35 states.

Through its nutrition education and public relations program, NDC promotes a program of health education and a better public understanding of the dairy industry. It utilizes the most effective tools available to disseminate nutrition information to national and local leaders who influence the food habits of consumers.

Tools employed are: nutrition research, personal contacts, leader meetings, printed materials, timely exhibits and displays, colorful films, professional advertising, and press, radio and television. Through these various public relations and educational tools, contacts are made with government, professional, educational and consumer groups and leaders.

The National Dairy Council is in its 41st year of service, promoting health education. Since the inception of the Dairy Council program, millions of educational materials stressing the food values of the seven basic food groups have been made available and used by public health authorities and educational leaders in their programs. Today, on an annual basis, more than 230 different pieces of educational material, in quantities reaching 20,000,000, get into the hands of these leaders who use the information in their own classrooms and offices where they are in close contact daily with men, women and children of all ages. Information in these educational materials is documented by research findings.

The National Dairy Council is governed by a board of directors composed of industry executives elected to the board at NDC's Annual Meeting late in January. Equal representation is assured on the Board from the butter, cheese, ice cream, milk and product segments, as well as from manufacturers and jobbers of dairy equipment and supplies. NDC is supported by membership dues from dairy farmers, through the American Dairy Association, processors and distributors of dairy foods, and manufacturers and jobbers of dairy equipment and supplies. Ice cream dues are paid through the International Association of Ice Cream Manufacturers. Affiliated Dairy Council unit programs are financed by local dairy farmers, milk processors and distributors and ice cream manufacturers in some markets.

to help you relieve  
the severe emotional upset  
of the menopausal patient



## THORAZINE\*

'Thorazine' can facilitate the over-all management of your menopausal patient. Its unique, non-hypnotic tranquilizing effect relieves anxiety, tension, agitated depression and helps you to restore to the patient a feeling of well-being and a sense of belonging.

'Thorazine' is available in ampuls, tablets and syrup (as the hydrochloride), and in suppositories (as the base).

*For information write:*  
Smith, Kline & French  
Laboratories, Philadelphia 1

\*T.M. Reg. U.S. Pat. Off. for  
chlorpromazine, S.K.F.

you won't want to miss  
"MODERN TRENDS IN MEDICAL EDUCATION"

VOLUME 65 • MARCH 1956 • NUMBER 3

# THERAPEUTIC NOTES



*medical education, page 61*

PARKE, DAVIS & COMPANY

leading article in the March issue of THERAPEUTIC NOTES

00022



Lift the depressed patient up to normal  
without fear of overstimulation . . .

with new

# Ritalin®

A HAPPY MEDIUM  
IN PSYCHOMOTOR  
STIMULATION



- Boosts the spirits, relieves physical fatigue and mental depression . . . yet has no appreciable effect on blood pressure, pulse rate or appetite.

Ritalin is a mild, safer central-nervous-system stimulant which gently improves mood, relieves psychogenic fatigue "without let-down or jitters . . ." and counteracts over-sedation caused by barbiturates, chlorpromazine, rauwolfia, and antihistamines.

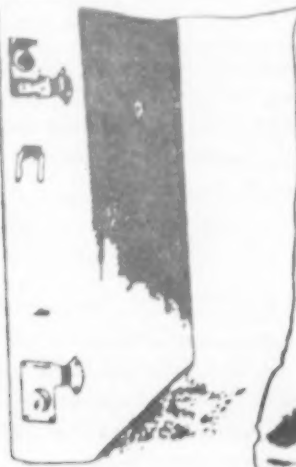
Ritalin is "a more effective and less over-reactive drug than amphetamine or its derivatives."<sup>2</sup> It does not produce the "palpitation, nervousness, jitteriness, or undue pressure in the chest area . . . so frequently mentioned by patients on [dextro-amphetamine sulfate]."<sup>3</sup>

Dosage: 5 to 20 mg. b.i.d. or t.i.d.,  
adjusted to the individual.

RITALIN® hydrochloride  
(methyl-phenidylacetate  
hydrochloride CIBA)

References: 1. Pocock, D. G.:  
Personal communication.  
2. Harding, C. W.: Personal  
communication. 3. Hollander,  
W. M.: Personal communi-  
cation.

Supplied: Tablets, 5 mg.  
(yellow) and 10 mg. (blue);  
bottles of 100, 500 and 1000.  
Tablets, 20 mg. (peach-  
colored); bottles of 100  
and 1000.





from

## POETRY...

"...in today already walks tomorrow."

COLERIDGE



to

## PHILOSOPHY...

"...most human activities advance by virtue of contributions from many different types of individuals, with vastly different endowments, working at different levels. Medical investigation is no exception to this rule."\*



to

## PHARMACEUTICALS

"In the research activities of the pharmaceutical manufacturers, therapeutic trends based on fundamental advances in biology and medicine clearly modify continually the subjects and directions of research."\*\*

*H. L. Daiell*

H. L. Daiell, M.D.  
Scientific Director

P. S. Lakeside Laboratories specializes in the synthesis of new and distinctive compounds designed for "tomorrow's" therapy of cardiorenal, gastrointestinal, ventilatory and other disorders.

\*The American Foundation: Medical Research:  
A Midcentury Survey, Boston, Little, Brown  
and Company, 1955, vol. 1, p. XXXI.

\*\*Ibid., p. 600.

# Preventive Medicine and the Colorado Springs Conference

JOHN P. HUBBARD and DUNCAN W. CLARK

**I**N 1952 a conference in Colorado Springs brought together deans, teachers and others interested in preventive medicine in relation to the broad field of medicine and medical education. This assembly of spokesmen for medical education and representatives of preventive medicine provided an opportunity for the direct exchange of ideas and offered promise of having an important influence on medical education, as may be expected of each in the series of annual Teaching Institutes sponsored by the Association of American Medical Colleges. The specific influences of such a conference are difficult to assess. Here, however, is a view of preventive medicine a couple of years after the Colorado meeting, based on retrospect and on information specifically gathered for the purpose of this discussion from the chairmen of departments of preventive medicine.

## Factors Involved

First, it may be helpful to identify certain factors to which weight was given in the choice of the program

for the Colorado conference. From this choice certain trends might be expected to follow. Two of these deserve emphasis.

In the planning stages of the conference, there was agreement that preventive medicine should be represented and discussed in its broadest meanings. The subject was not to be considered "department-size" but was to be viewed as a theme to which all elements of a school could contribute and as an instrument of potential aid in unifying some parts of the medical course.

A second influence affecting the choice of program for the conference was the recognition of certain changes and trends appearing concurrently both in medical education and in preventive medicine. At some points these changes intersect and interact in a way which has a determining influence on the role of academic preventive medicine in medical education. Prominent among them are the recently developed medical care demonstrations which involve medical education in an extramural function. The addition of the extramural sphere may be looked upon as a development which is not a movement away from the medical center and its highly developed teaching so much as it is an extension which incorporates certain advantages that are found only beyond the walls of the medical school

---

This article is based on a presentation at the 1954 Annual Meeting of the Association of American Medical Colleges at French Lick, Ind.

Dr. Hubbard is chairman of the department of public health and preventive medicine, University of Pennsylvania School of Medicine.

Dr. Clark is chairman of the department of environmental medicine and community health, State University of New York, College of Medicine at New York City.

and its teaching hospitals. Further, it is in experimentation with the coordinated use of the health services of a hospital and its community that there is promise of development of a new concept and demonstration of comprehensive health care. The adaptation of professional practices to this teaching purpose is, moreover, a major direction which is current in medical education and an activity and interest shared by several departments of the school. "Comprehensive Medicine" is a term commonly used to denote this emphasis. Preventive medicine is obviously a part of both the idea and the practice of comprehensive medicine.

It is by virtue of possessing certain knowledge and skills that the teacher of preventive medicine now finds himself in the path of this larger movement within medical education; in not a few instances he has helped establish the path. These skills may be epidemiological, administrative, clinical, investigative or any combination thereof. From a working knowledge of the community and its resources for the care of the individual, from study of population phenomena, from experience with the effect of the environment upon the health of the individual, the department of preventive medicine can contribute to the formation and operation of a wide variety of comprehensive medical care programs or demonstrations.

#### **Emphasis on the Individual**

In these relationships within the school and in the changing pattern of medical education, one fact stands out most noticeably. It is the extent of preventive medicine's interest in the individual and the manner in which the interaction between the

individual and his environment is viewed.

Traditionally preventive medicine has dealt with the natural history of disease with particular reference to environmental factors and agents as they affect aggregates of people. This, of course, continues. In addition one finds an increasing interest in the host, not only as a population aggregate, but as an individual. Today the field of preventive medicine includes a lively concern for the well-being of the individual and the influences of his personal environment.

The most immediate part of the individual's environment is his own family. Accordingly, attention is given to family relationships as they affect health and to the family as a unit for comprehensive medical care. Family home care programs of two general types are to be found. In one, students visit the home and have supervised experience in diagnosis and treatment in the home setting. In programs of this nature the student visits the home on a p.r.n. basis—to borrow a term from therapeutic medicine. A call is received, passed along to the student and the student with little black bag in hand goes to the home to tend the sick.

In contrast to the p.r.n. program, a somewhat different type is designed to give the student graded responsibility for a family over a continuous period of time. Dr. Wilson Smillie was the first to develop a program under the title, "Family Health Advisor Service," with emphasis upon supervision of health rather than treatment of disease. Cornell Medical College provided this experience for its students in the clinical years; more recently the Pennsylvania School of Medicine initiated a program in which students were offered an opportunity to serve as health advisors to care-

fully selected families throughout the four years of medical school. Elsewhere, similar extramural programs are appearing with modifications according to the philosophy and the circumstances of the locality.

### Community Use and Service

Beyond the family circle, in the wider environment of the community, a department of preventive medicine also has a natural and special interest arising from quite practical reasons. The community provides an important resource for both research and teaching.

Biostatistics and the epidemiologic approach to the study of disease are basic to preventive medicine and shape much of its research. A survey of the research programs of departments of preventive medicine reported at the Colorado Springs meeting revealed epidemiologic investigations in the community heading the list with such projects as studies of acute illness in a family population, the epidemiology of chronic illness and the effectiveness of specific prophylactic measures.

Also, by virtue of its teaching programs the department of preventive medicine is the channel through which the medical school is most closely in contact with official and voluntary health agencies. In providing an opportunity for students to see how these agencies can help the practicing physician in the care of his patients, the teacher of preventive medicine becomes familiar with and frequently active in community health activities.

One may wonder at the unlimited cooperation received from a wide variety of official and voluntary agencies. Today, it is not uncommon to introduce students to the programs of these agencies in small

groups or perhaps even individually. This small group approach is time-consuming and repetitious. But the representatives of community agencies give of their time freely, for they too recognize the importance of having the physician-of-tomorrow better acquainted with the ways in which the services of these agencies can benefit him and his patients.

### Student Benefits

It is sometimes said that students can learn about the environmental factors which influence the well-being of patients without taking the time to visit the home and the many extramural activities. They can, it is claimed, acquire this information in the lecture hall and in taking careful histories of patients in the clinic. A part of this argument springs from the fear that the student may spend too much of his time outside of the medical school laboratories and hospital clinics to the detriment of other important aspects of his learning. But the values of direct observation and participation are no less important here than in the laboratory and at the bedside. This means that the student must get about in the community itself and become personally familiar with its resources and its effects upon individual health.

Through this opportunity for direct contact with the community, the student acquires a better understanding of his own role and of the contributions that others can make in aiding the individual's adjustment to life around him. Quoting from the report of the conference<sup>o</sup>, the matter

---

<sup>o</sup>"Preventive Medicine in Medical Schools," Report of Colorado Springs Conference, Nov. 1952. Clark, K. G. with editorial committee, Hubbard, J. P., chairman. *J. Med Educ.* 28 (10, pt. 2), 123p. Oct. 1953.

was thus expressed at Colorado Springs:

"Not only must the physician know the wide range of facilities and resources which the community provides for the health and welfare of its citizens—from visiting nurse to job placement service—and know how and when to direct patients to them, but he must also be prepared to assume a pivotal position on a health team of many players. He must know how to work in intelligent cooperation with representatives of more than a score of specialties and subspecialties of medicine itself; and with a wide variety of other people on this team, within the hospital and within the community—dentists, nurses, psychologists, occupational therapists, dietitians, medical and psychiatric social workers and many others. He must be aware of the contribution that each can make to an improvement of individual and collective health in the community, and try to make the sum total of their contributions result in an integrated, rather than piecemeal, health service to his patients."

### **Changes Noted**

Both before and after the Colorado Springs meeting, a variety of demonstrations could be seen in which medical schools were relating themselves to comprehensive medical care in the community. Just as it is unlikely that one can attribute the nature of a program in its entirety to any single influence, so it is difficult to assess, except in a gross way, the impact of the Colorado meeting on the program of an individual school. Among the replies received to an inquiry on developments that may have grown out of the Colorado conference, several credited the conference with aid in the refinement of programs already in existence and of others at the time in a stage of preparation. Some reported reorgan-

ization or new programs as a direct effect of ideas presented at the conference. The area most heavily represented as the site of change was that of comprehensive health care.

At Colorado Springs, comprehensive health care was regarded as a concept both of medical practice and medical education. It was pictured as a concept of coordinated health services directed toward the continuous well-being of the individual in an optimal capacity, through his own efforts, the guidance of his physician, and the assistance of various individuals, groups and agencies engaged in health activities in the community.

Some schools demonstrate its meanings in segments and a few are attempting it in toto; some show it in cross section and some longitudinally. Aspiration to the full demonstration of such care requires institutional acceptance of responsibility for some or all forms of continuing care of a defined population, including extension of such service to the home. Such programs are generally expensive and the most highly developed are commonly supported, in part, by foundation grants. Their cost is due in some measure to a marked increase in the supervisory teaching staff thought necessary, for lack of which, many of the previous extramural teaching exercises were held in but limited regard.

### **Ways to Relate**

There are at least four varieties of relation between the university and the community in the creation of a demonstration of the components of comprehensive medical care:

(1) The university hospital may modify its admission and medical care practices in order to add extended and extramural care to its



usual services on behalf of a selected population group. (e.g., Cornell has such an arrangement with New York Hospital, and Harvard and the Massachusetts General Hospital have recently started a family health and medical care program.)

(2) The medical school or its hospital may arrange with local government to provide care on a fee basis to a defined community population unit, e.g., the recipients of welfare assistance. Home care is an important aspect of such programs. (Boston University, Medical College of Virginia, and Colorado have well developed programs of this type.)

(3) The medical school, through an informal affiliation with a health department, or similar community agency, may obtain permission for its students and staff to study and provide for certain of the clientele of the agency to a degree beyond the usual policy and practice of the agency. (e.g., State University College of Medicine at New York City.)

(4) The medical school may work out a full range of field trips to co-operating community agencies, demonstrating personal health services, the problems in their coordination, and the usefulness of these services to a patient and doctor. (e.g. Pennsylvania and Cincinnati.)

### Curriculum Coordination

The advantages of student opportunity for continuity of observation are generally conceded. The incorporation of these advantages in a curriculum is difficult to establish, however. It requires bringing the contributions of the several clinical departments occupying a single academic year into such coordinated alignment that continuity of student-patient relationships may be sustained over an extended period of

time. Cornell in 1952 and Boston University in 1954 reorganized their clinical clerkships through a pooling of schedules and teaching resources to bring about this as well as other objectives for a half of the fourth year course.

In the long-term type of demonstration, the initial clinical subjects of attention are commonly a mother and newborn infant, a chronically ill patient, or a family with children. At Utah, two thirds of the families assigned are "normal" in the sense of lacking serious illness among any of its members at the time of entrance into the program.

The supervisory staff for a teaching demonstration unit is generally drawn from a wide range of medical and professional skills. Social scientists are appearing in these programs, especially in research capacities. At the State University College of Medicine at New York City, the supervising staff for the family studies includes representation from clinical medicine, epidemiology, sociology, social work and public health nursing. Through such variety in composition of the teaching staff, the number of teaching and learning objectives in a family health demonstration is accordingly enhanced. One objective of this form of instruction is the interpretation of the data collected clinically for their significance to public health, the professional relationship, or other aspects of the medical course.

Comprehensive medical care demonstrations exist at several levels of educational course status. Some were established as electives in the absence of experience with such programs, for the advantage of trial with a small sample of students, and to avoid infringement of required teaching time. Many others have the status of required instruction. The most re-

cent form of instructional status is a by-product of introducing comprehensive medicine as a controlled experiment, e.g., at Albany and Colorado. Commencing in 1953, the third year class at Albany was divided into an experimental family care group and a control group. The selection of the study group was on the basis of stratified, random sampling so that the collective curve of academic achievement for the study group matched that of the entire class for the first two years. The control group has since followed the standard curriculum in preventive medicine and comparative information on student attitudes and performance is now in process of collection.

#### **Conclusion**

Preventive medicine has emerged from a background of bacteriology, sanitation and communicable disease control and is now commonly pre-

sented as a clinical subject concerned not only with the environment as it affects aggregates of people but more especially with the individual as he lives in his community and is influenced by his environment for better or for worse. A wide and growing range of roles—epidemiological, clinical, and administrative—is revealed in the current association of a department of preventive medicine with comprehensive health and medical care. There is, in this trend a better device for illustration of the concepts of preventive medicine, a useful research association for study of the movement of disease through units of the local population, an instrument of aid to the organization of the body of knowledge of human ecology, and an important resource for experimentation in medical education. The conference at Colorado Springs both mirrored and gave impetus to this direction for preventive medicine.

# The Training of Psychiatrists

JOHN C. WHITEHORN

WE ARE celebrating a significant phase in the development of a unit devoted to the specialty of psychiatry, and I have been requested to discuss in particular the training of psychiatrists. Preceding speakers have made many comments well calculated to delineate the broad scope of health services to which psychiatrists are in our day expected to make significant contributions. It would appear that my part is to focus attention upon a narrow segment, and to deal with the problems of preparing specialists for a specialty practice. I wish later to expand the scope of my remarks to include a more general view of the responsibility of psychiatry to the medical profession and to the public welfare.

There has been a large increase in the whole field of specialty training, as measured by the establishment or enlargement of residency programs in a number of the surgical and medical specialties. Some of the numerically recorded expansion is fictitious. Many of the figures regarding residency opportunities have to be taken with a grain of salt, because they have remained unfilled. The residency program in psychiatry, as in other special fields has been much affected,

since 1950, by the needs of the armed forces for young medical officers.

In crude numerical terms, the training of psychiatrists has come to be one of the boom areas of specialization in medicine. In Ebaugh's analysis of this development in the United States he has stated that the opportunities for resident training in psychiatry numbered 410 in 1930 and 1833 in 1951, more than four-fold multiplication. These figures are more meaningful when converted into the terms of an annually maturing crop of psychiatrists, approximately 150 in 1930, and 500 in 1951. Perhaps an even more meaningful index of psychiatry's changing scope in medical practice is afforded by another rough calculation: two decades ago something less than 3 per cent of the annual crop of medical graduates entered the specialty of psychiatry; more recently the proportion had risen approximately 10 per cent.

In addition to the large increase of those training for careers in psychiatry, the last two decades have witnessed a considerable qualitative change in the character of psychiatric training and practice. Psychiatry is one of the oldest of the specialties in the field of medicine. The principal psychiatric society, now called the American Psychiatric Association, is in fact older than the American Medical Association. It was founded

Dr. Whitehorn is the psychiatrist-in-chief at the Johns Hopkins Hospital, Baltimore, Md. This article is adapted from a speech given at the 10th anniversary of the Allase Memorial Institute, Montreal, Quebec, Canada, April 17, 1953.

in 1844. The first half century of that society, and the development of psychiatry during that time had been intimately bound up with the development of institutional care of the insane. The separateness of psychiatry was accentuated by the geographical remoteness of those institutions from centers of medical progress. The development of neurology during the second half of the nineteenth century had given some impetus to the desire for the closer integration of neurology and psychiatry and led to the development of a group of practitioners sometimes called neuropsychiatrists, possessing in general greater scientific knowledge than the usual hospital psychiatrist and particularly competent in differential diagnosis in that very broad range of disorders included in neurology and psychiatry. The medical profession at large was very appreciative of this type of specialist for several reasons. In the first place, this arrangement provided a single consultant who could give to the referring physician authoritative diagnosis and support. In the second place, it made referral somewhat more comfortable for the referring physician in many cases by providing a neurological camouflage. This was a fairly satisfactory arrangement when such referrals were chiefly aimed at "diagnosis and disposition."

#### **Board of Psychiatry and Neurology**

When the specialty boards were being established in the United States to provide some clear method of recognizing competence in special fields of medicine, the power of this idea was still strong and a combined Board of Psychiatry and Neurology was established in 1934. This board, in its examination of candidates for certification, began by giving like examinations to candidates for either

certificate, and in fact during the first decade of its operations about half of the successful candidates received certificates in both fields. Meanwhile, however, the psychiatrists were developing greater therapeutic skills, and this greater therapeutic effectiveness gained for that specialty greater acceptance, both with the medical profession and with the general public. The psychiatrist came to be recognized for something more than a diagnostic purpose. The reasons for referring patients to psychiatrists were therefore appreciably different, and the methods of training and of certification required the recognition of this change of function. With some external pressures and some internal strains, the Board of Psychiatry and Neurology modified its methods and differentiated more clearly the qualifications for acknowledged competence in the two specialties.

Some may wonder why I choose to mention this fact, for it may appear to be a trivial detail in the broad scope of our discussion here. I have given it special emphasis for several reasons: first, because the specialty boards have come to have a powerful influence in American medicine, as it is now organized; second, it illustrates a capacity for flexibility in adapting to progress in a type of organization inherently liable to conservatism, since the boards are basically controlled by practitioner groups; and third because I wish to give particular consideration here to the matters of "setting standards" and of "raising standards," and these matters of standards have been the primary concern of the specialty boards.

#### **Standards**

The setting of standards is a praiseworthy task, but it is loaded with grave dangers. Its value lies primarily

in establishing a minimal acceptable level which will serve to distinguish between those who are competent and those who are not competent, and the danger lies in the pressure toward mediocrity, the tendency to accept a minimal level of competence as if it were the ideal level of excellence.

Let us consider, for example, one of the principles of psychiatric training quite properly emphasized by the American Board of Psychiatry and Neurology—the need that the psychiatrist should have, during his training, a wide range of experience with different types of illness; severely psychotic patients in closed institutions, a wide range of ambulatory patients such as are found in out-patient services, children having varying types and degrees of behavior disturbance, medico-legal problems, neurological cases and so-called psychosomatic conditions. One can reasonably maintain that a psychiatrist, to be certified as competent and safe, should have some working familiarity with this whole range of conditions. Then arises the problem of how such experience can be provided during training. There are a few centers where such broad experience is available in a well integrated form, but such centers are few. To accomplish it for any large number, some type of affiliation is necessary, whereby there is much likelihood of a choppy, fragmented series of different assignments, none lasting long enough to provide a real comprehension of the patient's progress nor a basic grasp of the modes of treatment. Compromise arrangements, designed to fulfill minimal standards for large numbers, can easily be glorified as ideal, although the individuals subjected to such a fragmented program may be prevented thereby from developing a real mastery of anything in particular. This is but one illus-

tration of the ways in which emphasis on standards may impede the pursuit of excellence.

In June 1952 a conference was held, under the auspices of the American Psychiatric Association and the Association of American Medical Colleges, for the discussion of the training of psychiatrists. The conference spent a week in very earnest discussion, and it did not neglect the difficulties inherent in the problem of setting standards. One of the principal topics of discussion was "Ideals and Practices in Residency Training," and the topic was so formulated in order to permit and encourage a discrimination between the requirement of minimal standards and the encouragement of excellence, surpassing any reasonable minimal levels. Although a final report is not yet available,<sup>1</sup> it is permissible to quote a few sentences which will serve to include the general idea expressed at the conference:

"The goal of a basic psychiatric training program is to develop, in adequately prepared physicians, knowledge and understanding of mental health and disease, and the skills and attitudes to use such knowledge effectively in the care of patients and in the public interest. . . . The educational goal of psychiatric training is not merely to produce good disciples of excellent masters but to foster self-educational attitudes and to cultivate habits of continuing study and ideals of responsible professional leadership. It is desirable that the resident develop the capacity to use his knowledge and the community resources in community efforts for the preservation of mental health; and that he develop interest in furthering

1. Published subsequently (November 1953) as "The Psychiatrist, His Training and Development," *Am. Psychiatric Assn., Washington, D. C.*

the progress of psychiatry through teaching and research."

These statements reflect, I believe, a healthy awareness of the incompleteness of psychiatric knowledge, and a determination to avoid the complacency inherent in a program merely of instruction or merely of training. The ideal set forth indicates an attitude of partnership between the older and the younger members of the psychiatric profession working together for the improvement of psychiatry. It is this ideal of partnership in a common cause which appeals to me as the most stimulating and constructive ideal in the orientation of the younger members of the profession and in the shared progress toward more thorough understanding and more effective practice, while encouraging creative talent and constructive investigation. It is necessary to keep repeating such ideals during a period of "standard setting" and of rapidly expanding training facilities, in order to counteract some tendency toward the complacent acceptance of mediocrity, likely to prevail under the pressure of greatly expanding numbers and much emphasis on "standards."

It is fairly easy to designate at least in broad general terms, the range of conditions with which the resident in psychiatry should gain personal familiarity and immediate experience, as the basis for sound clinical judgment. It is more difficult to specify, and still more difficult to provide, the kind of senior partnership which will serve to illuminate this clinical experience by the best current basic knowledge and the most constructive current theory. The limited supply of high-grade teachers is one grave difficulty, not only because of the shortage of numbers, but rather more because of a shortage of time and energy, for there is probably no more

overworked group in the whole field of medicine than the teachers of psychiatry. They are placed under heavy pressures for extracurricular services of infinite variety and complexity. These pressures may tend to induce a hasty didacticism, which tends toward spoon-feeding and an infantilization of the resident, quite inappropriate for the highest stage of professional education. This tendency toward spoon-feeding is most marked when a training center is dominated by a particular school of psychiatric theory. The improvement of psychiatric teaching in medical schools is doing much to overcome this tendency, by providing a broader orientation in psychiatry prior to specialized training. There has also been some diminution in cultist rivalries, and better provision that the resident shall have ready access to, and regular working contacts with, psychiatrists representative of various schools of thought. One of the traditional devices for providing a breadth of view to the resident staff has been the staff conference, attended by proponents of a variety of schools of thought, where the presentation by the resident of his case study can elicit different interpretations and formulations and lead to new questions and a comparison of viewpoints. It has also been very useful, in my experience, to have thorough case presentations by senior members of the staff, representing various approaches and methods, illustrating strategy as well as tactics, and giving the residents a basis of comparison between different approaches.

It seems inevitable, however, that in every center for psychiatric training there is one leader whose attitudes and methods make a particularly strong impression on the residents and tends to arouse their loyalty and emulation, nor is this



undesirable, for it may provide a firm working foundation for further professional growth. During several years of service on the American Board of Psychiatry and Neurology I had occasion to observe many candidates at work and to discuss with them their concepts and methods. It was often possible, thereby, to identify the institution at which they had trained. Sometimes candidates seemed to know only one approach to psychiatry. Some of my friends on the board used to be much disturbed by such evidences of provincialism. One in particular used to evince great annoyance when none of the candidates whom he had examined showed any familiarity<sup>1</sup> with the ideas of the great French psychiatrist, Pierre Janet. My own opinion is that such gaps in knowledge are deplorable but not disqualifying for a certificate of practical competence. Had we been examining candidates for a professorship, such ignorance would of course disqualify. This detail presents again in another form the issue of standards of practical competence versus ideals of excellence. A degree of provincialism, considered to be a tolerable lower limit for acceptable competence, cannot wisely be held acceptable as the general level of aspiration in psychiatry.

#### **Provide Against Provincialism**

It appears desirable therefore to consider in what ways one can provide against a narrow provincialism of ideas, if not for all, at least for some. One basic safeguard, in large medical centers, is provided by the working relations of the resident staff with psychiatrists of different origins and background. Another, more effective safeguard against provincialism, is a period of foreign study, if not literally in a foreign country, at least in a different center,

where there is a somewhat different orientation and where one can learn to view familiar problems in a different working perspective, or become master of a different method. This is not a very common practice in psychiatric training in these days. Many of us have been greatly interested in Dr. Cameron's efforts to encourage some of his younger men to expand their basic training by a period of special training in other centers, for that practice seems well calculated to accelerate the advancement of psychiatry.

The tendency of young psychiatrists to stick close to one center, rather than seeking diversified training in different centers, has been accentuated by the greatly increased emphasis on psychodynamics as a basic science in psychiatry. This sounds somewhat paradoxical, for psychodynamics has been defined as the body of knowledge and theory concerning motivation, and it might seem reasonable to believe that one's knowledge of motivation would be enhanced and deepened by familiarity with diversity of institutions and cultures, rather than by sticking close to one place. The paradox is explained, to some extent, by the observation that a good working mastery of psychodynamics seems, in a practical way, to depend very largely upon the intensive study of a series of patients over a long period, which is not possible if one moves from place to place.

#### **Psychodynamics**

Having introduced the topic of psychodynamics in this indirect way, I wish now to discuss it more extensively, because of its great intrinsic importance in modern psychiatry, and the way in which it influences the character of psychiatric training.

To make clear the meaning of my

comments on this method, I should say a bit more about psychodynamics and its relation to psychiatry. In a general way it can be said that psychiatry deals with disorders of the personality functions—disturbances, that is, in the conduct of life and in the interpersonal transactions and attitudes which in the main determine one's satisfaction or dissatisfaction, represented as inner distress, anxiety or depression, or manifested in various neurotic or psychotic compromises and pseudo-solutions. We know of many physical, chemical and microbiological agents of disease and mechanisms of physiological and pathological functioning, which have deleterious effects upon the personality functions, and our knowledge of such matters forms an important part of our basic scientific orientation to psychiatry. All these factors have their *psychiatric* importance because they impinge upon and impair the personality functions. Hence some working theory of personality constitutes the core of a working theory of psychiatry. Central to such understanding is the knowledge and theory of motivation. It has been said with much truth, I believe, that the most significant development in modern psychiatry has been its expansion from a descriptive to an *interpretive level*, and in that statement *interpretive* means an understanding in terms of motivation. Historically, American psychiatry has been deeply indebted to Adolf Meyer for the basic effort to develop an understanding of disturbances of behavior through a study of one's personal history and an understanding of personality development. Much of the important Freudian contribution to psychiatry has, in this country, been incorporated into this basic psychobiological orientation, with less tendency toward separatism than in most countries. It

would be preposterous to claim that this process of assimilation of Freudian psychoanalysis has been complete, or that no conflicts, pains and scars persist; but it is realistic, I think, to state in a general way that there has developed a certain body of knowledge, and even some theoretical concepts, about behavior dynamics, on which some agreement exists among well informed psychiatrists. At any rate, the 1952 conference on the training of psychiatrists produced an interesting document indicating a fair measure of agreement as to what psychodynamics is all about. There was also much discussion as to the way in which a knowledge of psychodynamics can be developed during residency training. Quite clearly, it requires much time to develop a knowledge of psychodynamics and much opportunity for conferences with older staff members. In this connection there was, at the conference, much discussion of the role of psychoanalysis in the training of psychiatrists. The members of the conference expressed quite generally much appreciation of the contributions of psychoanalysis to psychodynamics, and the desirability of psychoanalytic training for those choosing to devote themselves to the practice of psychoanalytic therapy, but the conference was also quite definite in agreeing that a personal psychoanalysis is not a necessary part of psychiatric training, nor necessary for a working knowledge of psychodynamics.

One notable feature of the conference discussions was the special emphasis upon the need for some experience in child psychiatry as a part of general psychiatric training, in large measure, I think, because of the insight into psychodynamics which can be gained from the study of children's problems.

The great value of insulin therapy and electroshock therapy have considerably modified the practice of psychiatry and have required special arrangements for residents to participate actively in these techniques, to gain technical competence and to learn at first hand the problems involved in attempting to integrate psychotherapy with shock therapies. There is no very practical means for providing active participation by all residents in surgical treatment by frontal lobotomy. The development of drastic therapies involving injury to the central nervous system, temporary or permanent, has however revived and accentuated the need for each psychiatric resident to gain a knowledge of the form and functions of the central nervous system. The nature of the basic neurological knowledge needed is somewhat different than was practically necessary a few years ago, when the character of consultative specialty practice made it desirable that the psychiatrist be highly qualified in clinical neurology. The neurological knowledge now most earnestly desired by psychiatrists has its principal relevance for the functions of learning and unlearning, and the modifiability of the emotional regulation of personality functions. The problems of what and how to teach such neurophysiology have not been generally worked out. In our experience at the Henry Phipps Psychiatric Clinic it is worthy of some notice that a considerable proportion of the resident staff have chosen in recent years to work on special problems with Dr. Horsley Gantt, in the Pavlovian Laboratory, studying the learning process and disturbances of learning.

### **Social Anthropology**

One of the problems in the training of psychiatrists for which no very

satisfactory general solutions have been developed is the method of fulfilling the obvious need that psychiatrists should be well informed regarding sociology and social anthropology. Various experiments in collaboration have been attempted in different training centers. Such experimentation has been most practical and productive in university medical centers where collaboration could be arranged with departments of sociology and anthropology, an illustration of the basic importance of the university setting for specialistic training.

The strong tendency in recent years for those wishing residency training in psychiatry to seek it in the teaching hospitals of university centers has temporarily embarrassed the isolated mental hospitals who formerly depended somewhat upon the services of young residents in training for their routine work. Adjustments must be made for such dislocations, but it seems to me quite sure that the tendency will bring great advantages, not only in the better training and greater effectiveness of psychiatrists but also in a more fruitful and regular interchange between psychiatry and the rest of medicine. We used to say that medicine is all one, *despite* specialization. Perhaps we might better say that medicine is all one, *because of* specialization, for it is only through group action that specialization is most advantageous. Psychiatry stands to gain more, and to contribute more, since the training of psychiatrists has so generally moved into university centers, and away from its traditional isolation.

I have been stressing the significance of the university setting for its consecutive value in the training of psychiatrists and for the advancement of psychiatry. There is a reciprocal advantage to the rest of the university. The universities have an

obligation to their medical centers, to make the arrangements and to foster the proper development of psychiatry, at its most advanced levels, within the medical center. The most significant advantages of the university setting for psychiatry are not

primarily curricular. It is not primarily because convenient teaching sessions can be arranged, but rather, because in a university center young men of diverse interests live together in intellectual fellowship with each other and with stimulating seniors.

---

### **Medical Education 100 Years Ago**

The following letter was written in 1859 by a young man just entering the medical school at Keokuk, Iowa.

Keokuk, Iowa  
November 5, 1859

Mr. & Mrs. Edward Grant  
Mt. Vernon, Illinois

Dear Uncle & Aunt:

. . . I arrived here Thursday morning after leaving your house and had a pleasant trip. I only paid three dollars fare from St. Louis to this place . . . Keokuk is a pleasant healthy place of about ten or twelve thousand inhabitants. It is thought that it has lost about one-third of its population in three years, having suffered worse in the late panic than any other city in the west . . .

I am boarding at three dollars per week and agreeably situated with one roommate. There are about 70 students in attendance and they are still coming in. It is a fine place to get instruction and the faculty take a great deal of interest in their students. I felt very green in entering but I find most of the students are as bad or worse. Some of them have been practicing for years and are as ignorant as quacks can well be. I have just seen the operation for lithotomy, stone in the bladder, performed on a little child of four years old. The stone extracted was much larger than a partridge egg. I never want to see another such operation performed.

I will be very busy from this time forward, having to attend six lectures daily and read up during intervals. Besides we will have to dissect at night as soon as the weather gets cool enough! . . . I do enjoy myself here and long to see the time arrive to leave, though I do believe anybody is a fool to undertake to practice medicine without attending at least one course of lectures . . . (Signed) T. T. Roane

Reprinted by permission from the *Illinois Medical Journal*, January 1956.

# Responsibility of the University in American Anesthesia

FRANCIS D. MOORE

**A**NESTHESIA IS the youngest of the surgical specialties. It bears substantial financial rewards for very young men. The early won income of anesthesia practice imposes a competition for personnel with the all-important pursuits of research, teaching and advancement of knowledge. For this reason, the universities have a most particular responsibility in American anesthesia today. This brief article will be concerned with an explanation of these four opening sentences.

## Anesthesia's Role

Is anesthesia part of medicine, part of surgery, or is it a law unto itself? This seemingly academic question, this exercise in semantics has a very special meaning today because anesthesia as a career for young men is new. Only a few thousand men have qualified for a career in this field. If it is going to pilot a lone course, it must count itself as the fifth basic discipline of the hospital, to navigate beside medicine, surgery, radiology and pathology. In some communities it is counted as a specialty of medicine because it seems to deal with drugs and with physiological reactions. In other communities it is counted as separate; the anesthetist is responsible only to the hospital director and to the dean. The surgeons with whom he works side by side every day are part of another world,

separated from him by the hood and sterile half sheet raised at the level of the clavicles. To our way of thinking, this makes no sense. The surgeon is a man concerned with the care of surgical patients. Surgical patients are patients suffering from acute, focal or traumatic disease, treatable by the techniques of surgery which include blood transfusion, antibiotics, parenteral supplementation, careful diagnosis, sharp dissection and anesthesia. The anesthetist is intimately concerned with care of surgical patients; both in war and in peace the anesthetist works only with surgical patients and works with them night and day. He is a surgeon. He is just as much of a surgeon as the chief surgeon of a forward hospital in the combat zone, whose saving of life depends upon the use of a hollow needle, a blood bank, a bacteriological laboratory, traction apparatus and intravenous dextrose. None of these latter techniques would have been counted as surgery 100 years ago but we know that they are as much part of surgery as the deft twist of the scalpel around the carotid artery. The anesthetist is a surgeon along with the neurosurgeon, the urologist, the gynecologist, the plastic surgeon, the thoracic surgeon and the general surgeon. The anesthetist should seek his training initially as a surgeon. Administrative problems of anesthesia and its financial relationships should be worked out in collaboration with surgery. Anesthesia is a part of surgery and as such it is the youngest of

Dr. Moore is head of the department of surgery, Peter Bent Brigham Hospital; and professor of surgery at Harvard Medical School.

the surgical specialties and it should find its destiny with surgery and not apart from it.

### **Financial Rewards**

The financial rewards available to the young anesthetist need no elaboration here. Following a year of internship and two or three years of residency training the anesthetist today can step into an income in the general range of \$10,000-\$15,000 while his friend in general surgery is still in a white suit. In a recent survey of anesthesia in this country we encountered many young anesthetists, around the age of 30, and without Board certification, earning incomes in this range. For the general surgeon at the same stage of training and development this is virtually impossible. But more important is this fact: for a young anesthetist heading into a university career, it is absolutely out of the question. It is at this stage that he might possibly qualify for a senior fellowship of the American Cancer Society or a Damon Runyon Fellowship or a fellowship of the United States Public Health Service, yielding him a stipend in the general range of \$3,600 to \$4,200 a year. In no other field of medicine is there such a financial differential between the man who goes out into practice at the age of 28 to 30 and the man who stays behind to advance learning. This financial reward to the young anesthetist is, among other attractions, drawing young men into the field in significant numbers today. There are special areas of surgery of far older standing which are attracting fewer of the top-flight young men than is anesthesia, the youngest and newest to enter this field of competitive recruitment. One might wonder what sort of organization is going to main-

tain teaching activities and university services in the face of such competitive earnings for the young practitioner. Will it be bigger salaries, more standardized "ethical systems" which yield to the anesthetist a full bag of professional fees? Will it be better recovery rooms, fancier offices or higher academic titles?

Actually, experience has shown that it will be none of these things. The attraction of good young men into university anesthesia to advance the field will not come from any of these trappings but will come entirely from the professors of anesthesia in the universities and the men who are pushing forward with anesthesia research. Experience in other fields has shown that the attraction of young men from the top third of medical school classes comes not from financial rewards and the establishment of complex ethical systems, but instead from intellectual stimulation and the definition of new horizons toward which they can strive. This is quite clearly a very healthy situation. It would be too bad if the finest young men in medicine in this country today were attracted only into the field where income was the largest at the youngest age. Indeed, such income may attract the wrong ones or divert the talented men. We should remind ourselves that most college students heading into medical school do so because of a mixture of interest in human biology, a desire to take care of their sick fellows, and a very special idealism containing equal parts of religion, Oslerian ideals and missionary zeal. These men, as they go into anesthesia, will become the leaders of anesthesia 20 years from now. They will be the chiefs of anesthesia services at the great clinics, at the city hospitals, the county hospitals. They will be the professors of anesthesia at the universities. And



they will have started their training in the university services under the guidance of the professors. It is the function of universities in medicine today, and of anesthesia as a special division of medical sciences, to lure fine men and then to direct their energies for the good of all.

### Professional Obligations

The situation imposes a most particular obligation on anesthesia as an organized professional specialty. It is a common observation that the interests of "organized medicine" and of "university medicine" do not always coincide. It is a historical fact that the groups most actively opposing certain of the policies of the American Medical Association have frequently stemmed from the universities. There seem to be certain basic features of university motivation which are not always to be reconciled with those of organized professionalism. This is a healthy situation and there is room for both. The universities have a desire for freedom, for the establishment of professional relationships where there is free time for research, and where the study of the new is as important as the applied practice of the old. At the present time "organized anesthesia" is exerting a great deal of force on the men in the field. There is such apprehen-

sion that the services of a man might be paid by salary that the establishment of standardized patterns of practice is being carried on with very severe powers of coercion. In most ways these things are healthy and work to the good both of the doctor and the patient and they help to avoid commercial exploitation of anesthetists. But we should recall that if they are over-applied and if the concept of fee-for-service becomes too dominant, it will choke off the small start which has already been made in university anesthesia. And it is university anesthesia which holds in its hand the entire future of anesthesia in America. While university interests and professional interests may be in conflict, I believe we should carry forward with the conviction that both are important but that they should stay in their rightful places. Under no circumstances should we let the interests of the university, which will attract fine young men into anesthesia, be jeopardized by the interests of anesthesia professionalism, which guarantees a maximal income, but perhaps little other opportunity. The riches of anesthesia lie not only in a comfortable living but also in the challenge of biological science. It is this challenge which will guarantee the continued growth of American anesthesia by attracting the finest medical students to its pursuit.



# Patients' Attitudes in a Medical Care Program

MORRIS WEINSTEIN

## Introduction

**F**AMILY-CARE projects in medical school curricula are being evaluated from the viewpoint of their effects on students. The educational aspects of responsibility for family health in these programs are, of course, a primary consideration for the medical educator.

Studying this comparatively new method of developing a comprehensive understanding of illness can be a complicated one because of the intangible variables involved in growth. Psychological instruments of various designs have been devised to determine the influence of this training upon the students. In the Comprehensive Family Care Program at the Albany Medical College the attitudes of the students toward illness, and toward comprehension of socioeconomic factors in sickness, as well as their empathic grasp of human problems, are being focused upon.

Because of the reciprocal nature of this student-family experience, however, it is inevitable that the families in the program are also affected by this two-way educational process in which the student is functioning as a family physician. His handling of the doctor-patient relationship is reflected to some extent in the opinions of the patients, and many issues arise which a student would not ordinarily be confronted

with in a medical clinic setting.<sup>1</sup>

We are finding that the human relations aspect, which is considered very important to the patient, can be studied through the families' attitudes, as well as through its effects on the doctors-in-training. A preliminary survey was therefore undertaken in the first year of the program to determine how families' attitudes were effected by this relationship.

## Method of study

The investigator prepared a brief, open-ended opinion scale and, with the cooperation of the program's social worker\*, all 19 participating families were surveyed. While this number of families is too small to lend itself to statistical treatment, it is significant because it represents the entire patient population in the experiment. The material was gathered from family representatives. The mother in the family was utilized as the spokesman because she was the one through whom contacts with the doctor-in-training were made.

Each family representative stated in her own words what her attitude was. This provided the advantage of allowing for a more accurate presentation in terms of flexibility and expression of feelings. This method also permitted a careful qualitative analysis of the material. After a permissive atmosphere had been structured by the social worker the information was obtained. None of the

Dr. Weinstein is assistant professor in psychology, department of psychiatry; an instructor in the department of public health and preventive medicine; and a psychologist with the Comprehensive Family Care Program at Albany Medical College. The Family Care Program is supported by a grant-in-aid from the W. K. Kellogg Foundation.

\*Cynthia Griffin, director, Social Service Department, Albany Hospital.

forms was signed, and they were identifiable through a code number.

Only those attitudes considered to be directly affected by this experience were elicited. The specific areas investigated were: attitudes toward the project and students, attitudes toward the medical profession and attitudes toward the hospital. It was hypothesized that family attitudes toward the project would be influenced by their contracts with the students, and that this would extend as a halo effect to medical practitioners in general.

Opinions concerning the hospital were sought to determine the possibility of students' influence in either direction. Negative conditioning toward a sponsoring institution could make for adverse community opinion and would be a major drawback in carrying out this type of educational program.

#### **Attitudes toward program and physicians**

At the outset the responses of family representatives were anticipatory but neutral, essentially a wait-and-see attitude. They asserted this was a long-needed plan because it could provide prompt medical care and because the family would have its own doctor. The purpose of the program had been carefully interpreted to the families and they, in turn, were curious about the doctor-in-training. Surprisingly enough, there was very little question as to the students' competence. This was brought up only once by a matter-of-fact housewife who pointed out that doctors-in-training had to learn and this was a good opportunity for them.

As the program progressed, it was natural that family attitudes toward the project should become a reflection of the doctor-patient relationship engendered in family care. It also be-

came obvious that this relationship influenced the family's attitudes toward the medical profession, inasmuch as the students represented the profession.

An increasing feeling of security was expressed by the mothers because they were having a doctor of their own. For example, one mother asserted her tentative acceptance when the project was first explained: "I think it's all right, as far as I know about it." At the end of the year the result of her experience was reflected in her enthusiastic statement, "I liked it all the way through. I like having my own doctor."

Another woman with the initial noncommittal, guarded attitude that doctors were "all right" elaborated on her acceptance at the end of the year. The reason she changed her idea about doctors was that the family-care doctor didn't rush her and he explained what was wrong and what he was doing.

This attitude of appreciating the doctor's explanation was prevalent among families in the project group. It would seem that the patients attached noteworthy importance to the students' tendency to explain. This is probably not so much a matter of the patient's desire to learn more about medicine or even about every detail of an illness as it is a problem of emotional support.

The time the doctor spent in explaining was seen as a reflection of the respect or of the esteem in which he held the patient. The individual was reassured by this approach and flattered by the doctor's acceptance. This concept was succinctly epitomized by a family representative with the statement: "They realize that the patient has some intelligence." Research indicates that recognition of the patient's feel-

ings by one in the role of father surrogate is an important aspect of the medical relationship<sup>2</sup> and it is one which patients respond to consistently.

Despite the fact that the doctor-in-training aspect was interpreted to families, and the families in turn understood that the students "had to learn," they had faith in the students' abilities. One woman pointed out, "You'll have better doctors because of it." In another instance the acceptance of the doctor-in-training's dual role as a student and a medical practitioner was reflected in an incident toward the end of the semester. The doctor-in-training had been consulted frequently throughout the year. This one time, however, he was not called. The mother pointed out that she knew it was examination time and did not want to interfere with her doctor's finals. After the exam period the status quo was reestablished and he was again consulted as a family physician. In all these instances it was apparent that the relationship was more an empathic one than simply a matter of a competent person treating an illness.

The issue of having their own doctor to confide in and turn to was important for these families. There were two reasons that were given most consistently by the majority of families. In essence, 12 family representatives asserted it was very helpful because of these factors: 1. To know to whom to turn to get a doctor when you called. 2. It was a good idea to have one doctor who knew about the family rather than be passed around in a clinic among several doctors, who had only a perfunctory knowledge. These families also indicated that if it weren't for the project they probably would never have had a private doctor because of the cost.

The two families which had been

initially ambivalent about accepting the students at the outset changed their minds during the course of events, and at the close of the school year all 19 families were favorably inclined toward their doctors-in-training.

#### Attitude toward medical profession

When the families were first approached about participating in the program, their attitudes towards physicians generally were mixed. The majority were favorably inclined, but over one-third had reservations. Of the 19 family representatives, 12 expressed favorable attitudes and 7 were wavering or ambivalent. There were no negative attitudes. Reasons the ambivalent individuals gave for feeling uncertain were as follows:

**Don't like to be examined**

**They don't explain things**

**Doctors don't understand the person**

**Some work, some don't**

**They're O. K. for children**

At the conclusion of the first year, 16 of the 19 families showed positive attitudes toward physicians in general. Of the 12 who were originally favorably inclined all of them remained this way, and four of the wavering families expressed a more favorable inclination. The other three remained vacillating. While it is, of course, impossible to draw statistical conclusions on the basis of such a limited population, several aspects can be commented upon.

First of all, it is noteworthy that none of the participating families were adversely affected even though they were the first families the students had treated. The comparatively long-range contact with the students did not cause families to respond unfavorably toward physicians, indicating that on the whole the prolonged relationship was a constructive one. There were no negative reactions on

the part of those who were initially accepting of the medical profession. The experience did provide a basis for four of the seven originally wavering families to resolve their ambivalent reaction and become more accepting of physicians. So we can say that as far as could be ascertained there were no adverse changes in attitudes toward the medical profession in general.

If favorable at the outset, participating families remained that way through the year, and if ambivalent there was about a 50-50 chance of reacting favorably. Actually, we recognize that feelings are often complex and much goes into attitudes that makes them resistant to change. This is manifest even when environmental conditions indicate a logical basis for reversal of an unfavorable attitude. For example, when we examine the verbatim responses of the three families who remained ambivalent toward physicians in general we notice one factor in common to all statements. This factor is in the nature of a diffuse objection which is so highly personalized that it may have nothing to do with the effectiveness of medical care or with the physician's competence. For example, "I don't like to be examined," "Doctors are O.K. for children," "Doctors don't understand me."

In each instance there is apparently an emotional block which reflects some underlying resistance, regardless of the adequacy of the technical handling of the patient's illness. It is nevertheless apparent that the over-all reactions toward the medical profession assumed a favorable trend.

#### Attitudes toward hospital

At the outset 16 family representatives were favorably inclined toward the hospital, two were ambivalent

and one reacted negatively. Reasons among those who were accepting essentially reflected the concepts that this hospital "has the latest material," and that patients receive good care (some who had no direct contact with in-patient facilities stated how well their relatives were treated).

The two family representatives who were negatively inclined gave as their reasons "bad nursing care" and "high rates." The ambivalent individual asserted that she was not sure of her feelings about the hospital, stating an incident that had occurred approximately a year previously as the reason. She was called to the hospital to see a critically ill relative. Upon arrival she had received no information and then someone informed her of her relative's death. It should be noted that this negative reaction was somewhat ameliorated by the fact that later on another relative received very good care at the hospital. There seemed to be a tendency to form an opinion about hospitals which was based on others' experiences if the individuals did not have direct contact themselves.

After one year in the family care program there were no unfavorable reactions, and there was one vacillating attitude expressed. The 18 individuals who manifested a favorable attitude toward the hospital cited these reasons:

**They inform you of what they're doing**  
**Nurses are good**  
**Modern equipment**  
**Good care**  
**Clean**  
**Doctors there when needed**  
**Treat all patients the same**  
**Very good records**  
**Undecided**

The person who remained ambivalent asserted, as she did at the initial interview, that she thought the rates

were high. This time she added that her husband liked the hospital, so that there were two sides to the situation.

While these opinions cannot be considered related to the functions of the family care program, they do at least indicate that participation in the program of a small group of low income families does not create adverse attitudes toward a teaching hospital.

### Discussion

It is noteworthy that at the outset of the program the families predominantly expressed more curiosity about the interpersonal aspects than about the students' technical skills. They were concerned with how they would react to their "doctors" and seemed to be confident of the doctors-in-training medical adequacy. Where the students' competence was brought up it was done in a matter-of-fact, accepting vein ("they have to learn, too") rather than as an expression of anxiety. This was probably due to the security of knowing that an institution was behind the students and this represented a larger source of knowledge.

While the essence of the experience centered on the student-family relationship, it had a halo effect, too. This experience was extended to include physicians in general and placed medical personnel in a favorable light because of the satisfying doctor-patient relationship. The fact that the student took the time to explain was an important aspect in creating a favorable attitude. This finding is in keeping with current research in which patients expressed resentment toward being "rushed through" doctors' offices. For better or worse, self esteem seems to influence a patient's attitude toward medical care. As a result, the role of the physician in affecting the patient's

self esteem also effects the patient's attitude toward medical practitioners.

One reason this problem is hypothesized as being so particularly acute in medicine is because illness is often a threat to the individual. When threatened, it is inevitable that a person responds with some form of anxiety. In this time of stress his self concept is more vulnerable because he is dependent on the physician. How the patient responds is, of course, determined by his particular makeup. By the very nature of the experience an important consideration is how the physician handles the patient and the family, and how he influences their anxiety.

The "bedside manner" of physicians could be considered a means of coping with family anxieties and building up confidence. It is based on experience, intuitiveness and empathy in handling the patient so as to reduce the threat of illness by instilling faith in the practitioner. This can be as much a part of medical practice as a prescription. The essence of the positive relationship is that the doctor not impair the patient's self esteem but by his empathic approach convey his interest in the patient.

In addition to feeling that the students explained things and were sympathetic, there was also an appreciation by the families of having a doctor of their own. Here again was demonstrated the importance of the emotional ties between the family and a physician "who knows about our problems."

This relationship is coupled with antipathy the families expressed toward being shunted from doctor to doctor in the clinic. If this reaction could be generalized it would indicate a need for the broad services and emotional support of a personal physician practitioner who also fills the role of a counsellor. This search for

an understanding parent-figure whom patients seek may be complicated not only by frequent changes of doctors but also by the very nature of the complexity of medical practice, which makes for a high degree of specialization. Thus the particular doctor may be interested only in a specific segment of the individual's health and possess limited knowledge of the family.

That medical practice inevitably involves more than medication despite the increasing efficacy of modern diagnosis and treatment is revealed by current research. Counselling and health education activities are becoming increasingly prevalent. A recent nationwide study by the American Academy of Pediatrics, for example, indicated that only 46 per cent of pediatricians' visits on an average day were for actual medical care of sick children.<sup>3</sup> Another survey of 41 internists in one city revealed that 26 per cent of their professional time was spent on "preventive measures" and 19 per cent of the internists' time was devoted to "health education." Both of these aspects involve taking into account the patient's family life, beliefs, feelings and other circumstances if the information is to be optimally integrated.<sup>4</sup>

### Conclusion

As a result of this preliminary study of attitudes of the 19 families after a nine-month contact with the doctor-in-training, it is concluded that in the Albany Family Care

Program the participants succeeded in establishing themselves as reasonable equivalents of family physicians. The families' attitudes also demonstrated that, despite limitations of technical knowledge, third-year students can develop good relationships while providing medical service under close supervision. As regards attitudes toward the hospital, these were favorably affected, as far as could be determined, by the project. There were no negative attitudes expressed toward the hospital, toward the doctors-in-training, or toward medical practitioners in general at the close of the academic year.

It would seem that from the patient's viewpoint, this type of educational program can provide not only medical care but also a stimulating experience in doctor-patient relationship. Further, this relationship has the possibility of leading to a favorable concept of physicians in general and the sponsoring institution in particular.

### REFERENCES

1. Berle, Beatrice P., "The Family Health Adviser Plan in a Medical Setting," *J. Med. Edu.*, 28:6 June 1953.
2. Dichter, Ernest, "The Hospital-Patient Relationship" *The Modern Hospital* Oct. 1954.
3. Dowling, H., Shakow, D., Time Spent by Internists on Adult Health Ed. and Preventive Med., *J.A.M.A.*, V. 149, 628-631 June 14, 1952.
4. Report of the Committee for the Study of Child Health Services, American Acad. of Pediat. The Commonwealth Fund, N. Y., 1949, pp. 51-52.



# External Examinations in Medical Sciences

EDWARD M. BRIDGE

A MEDICAL SCHOOL, like other educational institutions, is faced with a dilemma when attempting to evaluate the achievement of its students. To ascertain whether its graduates have the knowledge necessary for safe practice is a major social responsibility; yet in the process, attitudes may be developed and habits encouraged that obstruct learning and the attainment of true competence. The usual examination, for example, demands the memorization and recall of facts as judged important by the instructor and the textbook, and with its connotations of success or failure the driving force behind learning becomes compulsion. The situation tends to create undesirable habits of learning and to encourage cribbing and a yearning to escape from all study. These results are contrary to the principles of good education and to a type of competence that is basic in all professional fields. The dilemma is not easily resolved for the current examination system is inseparably linked with the structure of the curriculum and with certification by state licensing boards.

Experiments have been conducted at all educational levels in a search for solutions of this dilemma. The college of the University of Chicago, for example, has evolved a unique university examiners office<sup>1</sup>. This group works closely with all departments in relating evaluation procedures to the curriculum and to the

objectives of the educational units. Furthermore, the examinations are designed to encourage broad study and understanding of principles, and to test ability to make applications of knowledge to new situations. Among medical schools, the Yale faculty has departed farthest from traditional practices<sup>2,3</sup>. For many years Yale has evaluated student achievement without local or departmental examinations; instead, the results of the National Board Examinations and personal acquaintance with students have been substituted. Other systems, each with its particular advantages and disadvantages, have been reviewed by Jones<sup>4</sup>. The Encyclopedia of Educational Research<sup>5</sup> also discusses procedures for evaluation.

The program described below approached the problem through student-faculty planning and the use of an external examination. While objections have been raised and the procedure is not free from criticism, the relationships between students and staff improved, responsibility for learning was accepted by the students, and where incompetence appeared, a new basis for help was established.

## The Experiment

At the University of Buffalo three major courses run parallel throughout most of the second year—pathology, bacteriology and pharmacology. Each has its own examination schedule. Scattered through the year are also 10 minor courses. At the end of the year all students are required to take Part I of the Na-

Dr. Bridge is professor of pharmacology and assistant professor of physiology at the University of Buffalo School of Medicine.



tional Board Examinations. How a student apportions his study depends in large measure on pressures from the examination schedule. The situation is not unique in this school but is common throughout most medical schools and many colleges. It is equally prevalent among secondary schools and represents a problem to be faced by all educators. The setting of the present experiment is merely an example.

Over a period of two years the department of pharmacology carried on a small scale experiment in the hope of improving the situation. The object was to eliminate the disciplinary element in departmental examinations and to convert them into positive components of the student's own system of learning. While no rearrangement of educational procedure can ever eliminate the struggle involved in acquiring competence in a field as wide and ever-changing as medicine, it should be possible to reduce the destructive fear and to aid the student in coming to grips with the realities of his chosen profession. All too often he dissipates his energies fighting the windmills of faculty discipline.

At the beginning of each school year frank discussions were held with the students regarding the purposes of examinations and the advantages of the various systems of evaluation. The goals described by the staff were two: (a) to assist the students to learn and to appraise their own accomplishment, (b) to allow the school to certify that its graduates have reached a satisfactory degree of competence. The class was asked to decide how these goals might be met in the most helpful way. Vigorous discussions and special class meetings followed. There were sharp differences between those who preferred freedom from the restrictions im-

posed by examinations and those who felt the need for some discipline that compelled them to study and indicated how successfully they were progressing. In the end both classes voted for the same policy, and this was followed consistently for two years.

The plan selected by the students and approved by the staff was essentially that in use at Yale University School of Medicine since 1924<sup>2</sup>. The department accepted the grade achieved in pharmacology in Part I of the National Board Examinations as the only and final evaluation for the course. Adjustments, however, were made to conform with the numerical grading system used in this school. The class was free to request practice examinations at any time, but only two were actually requested during each year. Practice examination papers were identified by a number known only to the student. After correction, the papers were returned and each person could determine his relative position in the class from a distribution curve of grades posted on the bulletin board. Throughout the year students were under no pressure to attend lectures, complete laboratory exercises or take practice examinations. The staff, however, made itself available to the students at specified times to discuss their questions. As each year progressed, there was general approval and satisfaction with the plan although some students regretted the class decision and felt themselves incapable of profiting by so much freedom.

### Results

The experiment offered opportunities to throw light on two questions that have implications extending beyond the local setting: (a) are medical students capable of organizing and directing their own study with-

out traditional academic pressures, and (b) what are the advantages and disadvantages of external examinations in the medical sciences?

An answer to the first question can be obtained from an analysis of the records of the students who participated and comparison with the nation-wide group which took the same National Board Examinations.\* The data are presented in Tables I, II, and III.\*\* It is apparent from Table I that freedom to study at their own pace and without faculty discipline did not place the student at a disadvantage in pharmacology as compared to the other subjects covered in Part I of the National Board Examinations. It is equally clear from Table II that their achievement was as satisfactory as—perhaps even slightly better than—that of students from all other schools combined. While the numbers in Table III are small, they suggest that both failures and honors were less frequent in the experimental group. The factors concerned here need further analysis and more extensive data. It would seem justifiable, however, to conclude that the answer to the first question is a strong "yes"—that second year medical students ARE capable of organizing and directing their own study without traditional academic discipline.

The second question—the advantages and disadvantages of external examinations in the medical sciences—is less easily answered. The difficulty arises in part because opinion and educational philosophy affect judgments, and no objective criteria can be established. Furthermore, to appraise external examinations ra-

tionally requires a familiarity with experiences elsewhere, most of which have been in fields other than medicine. An answer to the question is perhaps best obtained by comparing the current experiment with others regardless of the subject involved.

Historically, examinations conducted by individuals or groups outside the teaching faculty have been a cornerstone in university organization in Europe and Britain for well over a century. In Germany the examining groups have been part of the national educational organization. In Britain the system has depended on exchange or rotation of examiners between colleges and universities. The satisfaction with these systems is attested by the fact that they have withstood criticism in medicine as well as in the arts and sciences. In the United States the system as a whole has found little support although the Swarthmore faculty has used a form of external examinations with enthusiasm for over 30 years<sup>6</sup> and the Yale School of Medicine for approximately the same period<sup>8</sup>. In the larger universities in this country some of the advantages have been secured through comprehensive or departmental examinations, a university examiner's office as at the University of Chicago, or a rotation of one or more members of a departmental staff in the task of setting examinations while carrying no class instruction. With the growth of expert public service organizations that specialize in setting and grading examinations—college entrance, graduate record, medical aptitude, national and state certifying boards, etc.—the concept of external examinations has undergone a change and has become widely accepted for certain purposes. There has been reluctance, however, to make use of such a system in individual courses.

\*The grades achieved in the National Board Examinations were made available through the courtesy of Dr. John P. Hubbard, Executive Secretary.

\*\*Table appears on page 180.

A serious objection to such a system lies in the regimentation that can follow when an outside individual or agency sets policies and standards. The personal elements in the classroom and the particular interests and goals of the local institution tend to become subordinate to a broader purpose. This infringement on academic freedom is naturally resisted. Others object to the complications that external examinations add to a local system which may already be operating satisfactorily. They point out also that in the long run the result depends on the competence with which the examination is prepared and that there is no assurance of greater competence in an external group than in an internal one. A variety of other weaknesses are often mentioned, but most of them represent personal or local bias and do not bear on the underlying educational principles.

The advocates of a system of external examinations argue that because of altered relationships between students and instructors, the quality of teaching and also of learning are improved. Dr. Frank Aydellotte, formerly president of Swarthmore, points out that when students and faculty join forces to meet the challenge of a common goal and are freed from the servant-to-taskmaster relationship, the results may be startling. Of necessity the student has to accept responsibility for his own progress and engages in free exchange of ideas, opinions and criticisms with his instructors. Intellectual honesty, independence of thinking and aggressive inquiry are promoted. Faculty as well as students are prodded into changed viewpoints and new activities; stagnation is impossible. Knowledge comes to be judged by its universality, not by the fact that some individual or instructor has pronounced a "truth." He warns,

however, that the success of the system depends first and foremost on the quality of the external examiners and on the degree of confidence accorded to their work by the individual class instructors. This perhaps adequately sums up the problem. While the bulk of evidence appears to support the principle of external examinations, difficulties arise in the mechanics of working with such a system. Further investigation is needed here.

The external examinations used in the experiment under consideration were of a quality to inspire confidence. They are prepared by the National Board of Medical Examiners. The questions in each subject are constructed by a committee representing medical schools with wide geographic distribution. Consultants in the field of tests and measurements as well as technical facilities are available to insure a high level of efficiency in the preparation and scoring. While details have been criticized from time to time, few people deny that high standards are set or that the examinations are prepared and administered fairly. Thirteen medical schools make use in some measure of Part I or Parts I and II to evaluate student achievement.

Experiences with the two classes of the experimental group lent support to the advantages described above; they demonstrated only a single objection and this was essentially a mechanical one. Because the results of June examinations in Part I cannot be known until late July and custom dictates that promotions should be made before the summer vacation period, the department concerned was unable to contribute to the deliberations of the committee on promotions. This disadvantage, however, was offset by numerous educational advantages. Particularly no-

ticeable was the change in attitude toward study, toward the course offerings and the faculty. Learning became a matter of self-discipline and the goal became a field of knowledge rather than approval of an instructor. Course offerings and the contributions of the staff were accepted as opportunities and aids to learning, not as obstacles to be overcome. The instructor ceased to be disciplinarian and judge but joined with the students in an adventure in learning. The benefits were similar in all respects to those described by others in nonmedical situations.

Not all students enjoyed the new degree of freedom with its accompanying new responsibilities. To be compelled to decide for oneself what was important to study and how to proceed was an alarming experience for some and one for which they were unprepared. Students freely admitted that during the first part of the year they neglected the study of pharmacology and turned their efforts toward other subjects where pressures were greater. As the year drew to a close, however, the errors were recognized and compensated, although not without a struggle. In retrospect the experience was accepted as valuable and as one that seemed likely to help them achieve a better balance in the future.

While no objective criteria of the success of the experiment can be presented aside from the results achieved in the National Board Examinations, the intangible gains are in line with those described by others in collegiate situations and in the medical school at Yale. Without lowering standards of learning in the factual background of medicine, the system encourages the development of personal qualities that are of recognized importance in all professions—desire to learn, aggressive inquiry, self-di-

rected and responsible effort, and breadth of knowledge. Such human qualities associated with technical learning may be vital ingredients in eventual "success." If so, then a system of external examinations has a contribution to make that tends to be neglected in the more conventional programs.

#### **Discussion**

If these experiences are confirmed it would seem likely that the principles underlying external examinations might have applications to other aspects of medical education. These principles have been utilized in European universities and medical schools for well over a century and by the Yale School of Medicine for more than 30 years. The problem, perhaps, is less a matter of principle than one of finding some pattern and organization that will retain the advantages and minimize the disadvantages.

The examinations prepared by the National Board of Medical Examiners may not be ideal for this purpose. While prepared with laudable breadth and expertness, and designed to probe reasoning, judgments and applications, they tend to be weighted toward factual knowledge. Furthermore, they are organized into units corresponding to the traditional medical curriculum, and of necessity have a primary function that differs in some respects from that of an educational institution. These disadvantages might be corrected by developing a new set of procedures, independent of certifying boards and licensing agencies, and oriented to meet the specific needs of medical schools. Or it is possible that through modification of the policies of the National Board, a single set of examinations might serve both purposes. Medical educators are moving away from the Flexner pattern in

their thinking and considering the first year of medicine as a study of the well person, the second year as an introduction to the principles of disease and its treatment, and the subsequent curriculum as applications to actual human situations. The development of comprehensive examinations might be built on such a base, and provided that flexibility was retained to permit variation and experiment within medical schools, both purposes might be served.

A single examination that satisfied the needs of medical schools and certifying boards has the advantage of reducing the total number of examinations required of students and of incorporating the benefits of external examinations as well. The latter, however, could also be obtained by less complicated means. Two or more medical schools having similar educational philosophies and mutual confidence might work out a system of exchange or joint examinations. Or within a single school an examining group might be organized to carry the function of an external examiner. The individuals concerned should not be involved in personal contacts with students in the particular subject but would be clearly aware of the contributions of that subject to the field of medicine as a whole. There is more than one way of obtaining the benefits of external examinations in medical schools. And while no single system has been found to fill all needs, the subject deserves further exploration.

The experiment described above makes use of several accepted educational principles that are sometimes overlooked by medical teachers. The first is the use of student participation in education planning. As John Dewey pointed out long ago<sup>7</sup>, learning is a continuous growth process, and only the individual concerned

can establish the connections between old and new in a way that lends stability and permanence to the experience. Facts that are without clear relationship to the individual's past and goals for the future are retained poorly and utilized little in thinking and acting. Participation in planning for a new educational experience is a convenient means for establishing this necessary relevance. A second principle, viz. placing the responsibility for learning and achievement on the students themselves rather than on a parentally-minded faculty, has also been utilized. The effect of this change on motivation toward learning has been very real. As Jones has pointed out in his book on *Comprehensive Examinations*<sup>4</sup> " . . . American colleges, in general, have not been conscious of the great motivating value of the principles of external examining, recognized as of paramount importance in Europe for over one hundred years." It is clear from the results of the present experiment that medical students are capable of accepting the responsibility for their progress, and when they do, attitudes toward learning undergo a change. To the more mature students this change is welcomed; to others it exposes them to a degree of independence which they find hard to accept. Nevertheless, a wholesome and helpful relationship between students and faculty results, uninhibited by the need for creating favorable impressions or suppressing differences in opinion. The role of the teacher becomes that of guide, helper and challenger rather than taskmaster and judge.

### Conclusion

The present communication represents a small addition to the body of experience with external examinations. The results have been suffi-

ciently encouraging to suggest that the underlying principles may hold a key—but only one key—for re-orienting medical education toward goals that have changed in some measure since Flexner laid the foundation for the current pattern in 1910. It is hoped that others too will be interested and that through joint efforts the dilemma inherent in the present system of medical school examinations can be resolved.

#### REFERENCES

1. Bloom, Benjamin, in "The Idea and Practice of General Education," by present and former members of the faculty, University of Chicago Press 1950, Chapter 11.
2. Harvey, S. C., "The Objectives of Medical Education," *Yale J. Biol. and Med.* 13:847-62, 1941. Reprinted in *Yale J. Biol. and Med.* 26:8-22, 1953.
3. Lippard, V. W., "The Yale Plan of Medical Education after Thirty Years," *J. Med. Educ.* 29:17-23, 1954.
4. Jones, E. S., "Comprehensive Examinations in American Colleges," Macmillan and Co., New York, 1933.
5. Monroe, W. S., Editor, *Encyclopedia of Education Research*, Macmillan and Co., New York, 1941 and 1950.
6. Aydelotte, Frank, "Breaking the Educational Lockstep," Harper and Bros., New York 1944 Pages 38-42, 119-23.
7. Dewey, John, "Experience and Education," Macmillan and Co., New York, 1938.

TABLE I

Average grades received in Part I of the National Board Examinations by students in the experimental group.

|         | No. students | Average Grade in pharmacology & other subjects |      |
|---------|--------------|--|------|
| 1952-53 | 71           | 81.8   | 82.2 |
| 1953-54 | 61           | 81.6   | 81.5 |

TABLE II

Average grades in pharmacology in Part I of the National Board Examinations.

|         | Experimental Group | National Group |
|---------|--------------------|----------------|
| 1952-53 | 81.8               | 80.6           |
| 1953-54 | 81.6               | 80.8           |

TABLE III

Percentages of honor and failing grades in pharmacology in Part I of the National Board Examinations. Honor grades are 88 or above; failures are 74 and below.

|         | Honors             |                | Failures           |                |
|---------|--------------------|----------------|--------------------|----------------|
|         | Experimental Group | National Group | Experimental Group | National Group |
| 1952-53 | 8.5%               | 13.5%          | 1.4%               | 13.6%          |
| 1953-54 | 8.2%               | 11.5%          | 6.6%               | 9.5%           |



# Postgraduate Teaching and Its Integration in Medical Practice

J. GROEN

THE POSITION, THE WORK, and the teaching of the medical practitioner are at present vividly discussed in almost every country. We are facing, indeed, a paradoxical situation. At the very time when medicine is progressing in an unprecedented way, where better methods for the recognition, prevention and treatment of disease are being discovered almost every year, the medical practitioner feels himself less and less satisfied with his work and his position in society. From a leader in his profession and community, he is becoming a figure of minor importance; the family doctor, once treated with reverence as an authority, adviser and friend, is in danger of becoming second in medical knowledge and social standing to his more specialized colleagues.

It is not the purpose of this paper to come to the defense of the practitioner, or to recapitulate the arguments in favor of his recognition as an indispensable soldier in our battle against disease. We will, instead, confine ourselves in this discussion to a survey of the ways which are at present at our disposal to enable the practitioner to keep in touch with the progress of his profession and to give him thereby better opportunities to fulfill his task to the satisfaction of his patients, his colleagues and himself.

Dr. Groen is physician-in-chief of the Second Medical Service, Wilhelmina-Gasthuis, Amsterdam, the Netherlands, and temporarily of the Ballinson Hospital, Petach-Tikvah, Israel.

## Twofold Aspects of Postgraduate Teaching

The postgraduate teaching of the practitioner has two aspects and tasks. It seems useful to keep this in mind because much misunderstanding and disappointment in the past have been due to an insufficient realization of what complete postgraduate teaching actually means. For this purpose we propose to distinguish between:

A. The teaching of the practitioner in the progress of the different specialties of medicine. Every doctor must be informed about this progress to keep a sufficiently broad general outlook, and also because he may receive under his care patients who have been treated by specialists with some modern form of therapy which he may have to continue or supervise. Thus, the medical practitioner should hear about advances in cardiac surgery, about the possibilities of total gastrectomy, of electro-encephalography, etc., although he never utilizes these techniques himself.

B. Far more important for him, however, is the postgraduate teaching of those advances in medical knowledge for which he finds immediate application in his own practice. It need hardly be stressed that it is this form of teaching which the

From a lecture given before the Committee on Postgraduate Teaching of the Israel Medical Association, Jerusalem, March 24, 1954.



practitioner needs most.

It is also evident for everybody who has had experience in the present forms of postgraduate teaching, that the majority of the lectures, case demonstrations and courses which are offered to the practitioners in our hospitals are more concerned with postgraduate teaching "A" than "B." The fact alone that almost all present day postgraduate teaching takes place in hospitals, means that the content of the teaching material is derived from cases that represent only a fraction of the patients which the practitioner sees in his daily work. The population of a hospital is far from representative of the population that crowds the practitioner's waiting room. Furthermore, the present practice of having hospital specialists almost exclusively in charge of the training of general practitioners is not in harmony with the simple desideratum that the best teacher is the man who himself works in the job for which he has to prepare his pupils.

### **Conclusion**

The conclusion is that we have to complement our present method of teaching the medical practitioner in hospitals by a system which teaches him more about the type of cases which he has to deal with in his own practice. Teaching should become more pupil-centered and less teacher-centered.

Recognition should be made of the fact that postgraduate teaching is different from pregraduate training. The postgraduate knows what he needs to know far better than the student, and he learns as a mature man learns, often discarding some of the things the lecturer believes important. The postgraduate practitioner would and needs to play an active role in his teaching.

### **Some suggestions:**

Which then are the improved methods to recommend for postgraduate teaching? There is no doubt that for what we have called postgraduate teaching "A," lectures, case demonstrations, and courses in hospitals have and will always keep their legitimate place.

In the Netherlands the universities and The Royal Netherlands Medical Association and its branches organize these courses partly in the form of one or two lectures a week or a month, partly in the form of courses which take the whole day for one or two weeks. A pioneer in this field has been Professor Van Creveld who 15 years ago organized single handed the first postgraduate course in pediatrics for practitioners in his department. His aim was not to turn these doctors into specialized pediatricians, but to enable them to better handle pediatric cases in their own practice. Interrupted by the war, this course has since been resumed; it takes place one week every year and is increasingly successful.

In Israel this method of taking the practitioners out of their practice for a certain time and giving them an opportunity to work in a hospital has been brought to a high level of development under the leadership of Dr. Bandmann in the Beilinson Hospital. It has now been in operation for four years, giving practitioners an opportunity to follow courses of from four to six weeks (during which time they live in the hospital), to witness lectures and case demonstrations and to participate in ward rounds, staff-meetings and other medical activities. The experience gained in these years has been extremely useful as an indication of how to proceed further. The organized system of medicine in Israel makes it easier to provide the doctors with locums during

the time they are away from their practice and to continue their salary during their absence.

For the training of the medical practitioner for his own task ("B") discussion groups if well conducted are usually more efficient than lectures. They give the pupil an opportunity to utilize his own experience, subject it to the opinion of his colleagues and to receive the advice of the specialist in the points for which he wants it. If such a group functions as it should, the practitioners themselves choose the subjects, prepare short introductory papers in turn and usually, at least in the author's experience, ask permission to demonstrate one of their own cases before the group, which of course is just what we want them to do! The teacher, to achieve this, should be constantly aware of the maturity of his pupils and should encourage their active cooperation rather than dominate them by his specialized knowledge.

#### Amsterdam Panel

In Amsterdam the form of a panel discussion conducted by practitioners themselves before an audience of their colleagues, has recently been tested out as another attempt to promote the active participation of the practitioners in their teaching.

The leader of the panel (in this case the author) invited four or five practitioners to form a panel with him. They came to his office for a preparatory discussion where they chose the subjects themselves. It soon became clear that the practitioners knew much more than they had been aware of themselves, and that it was more in the form of the presentation and in the filling of certain gaps in their knowledge that they wanted guidance. On one occasion the chosen subjects were: "*The Differential Diag-*

*nosis Between Influenza and Incipient Pneumonia*," "*The Psychogenesis of Ulcerative Colitis*," and "*The Treatment of Urticaria*." The author provided one of the participants with a recently published textbook; the second came back for a personal talk to receive instructions on how to present his case of ulcerative colitis, and how to demonstrate the X-ray pictures; the treatment of urticaria was entirely left to the doctor who had proposed to speak on this subject, as he felt that he could manage it alone.

On the evening of the panel discussions about fifty practitioners and a few specialists were present. The author, after stating the aim of this experiment, immediately asked one of the practitioners panel members to start off. It was interesting to listen to the way in which this doctor criticized the textbook for the description of incipient pneumonia as it presented itself to hospital doctors on the second, third or fourth day. Against this, he gave his own experience of what he had observed in pneumonia patients on the first day of their illness and this was further commented on from the floor.

At this point, unrehearsed, another member of the panel began to criticize the insufficient opportunities, which the practitioner had at his disposal to obtain a quick bacteriological examination of the sputum of his pneumonia patients which, according to him, made it much more difficult for practitioners to institute the right form of antibiotic treatment in time. He added, however, that he had, since our preparatory discussion, gone to see the Director of the Municipal Health Service in Amsterdam and had, together with him, devised a way by which from now on the practitioners could have the sputum of every patient whom they suspected of having incipient pneumonia sent to

the municipal laboratory by car, and could have the answer within a few hours. Thus, this practitioner, unlike a student, had, while preparing a discussion, realized a deficiency in his present way of treating pneumonia and had found the way to amend that deficiency himself!

The paper criticizing the importance of psychological factors for the outbreak of ulcerative colitis was vividly discussed from the floor. The discussion on the treatment of urticaria gave some of the practitioners an opportunity to fulminate against one colleague, present in the audience, who tried to advertise a certain commercial preparation of doubtful efficacy. When this doctor insisted that this preparation of complex calcium was infallible against urticaria, he was advised from the floor to test saline solution first. This was applauded vividly.

The task of the author was mainly to encourage a free type of discussion and to state his opinion when he was specifically asked to do so.

On another occasion the subjects chosen were: "*Failures in the Medical and Surgical Treatment of Peptic Ulcer*," and "*Failures of the Reducing Diet in the Treatment of Obesity*." Although other practitioners served on the panel, the author had to help them to overcome the same inhibitions of "I have nothing new to contribute" or "I am a bad speaker." On the evening itself however, they performed equally well. It appeared again that the discussion from the practitioners on the floor was much more animated than after an authoritative type of lecture. Most significant appeared the choice of the subjects. They did not concern the successes in medicine, but rather the failures or those dark fields, about which the practitioners wanted guidance. Their choice, more than anything else,

pointed out the deficiency of our present teaching.

#### Other Discussion Methods

A very promising form of postgraduate teaching can be carried out in the office of a practitioner himself, or in a suitable outpatient department. Under this system the practitioners instead of sending their cases, come together with a consultant specialist for a session, where each brings one or two of his patients himself. This form of postgraduate teaching is ideally suitable for country practice. Between five and ten medical practitioners gather in the office of one of them, about once a week, where they meet with a specialist from the nearest town, preferably from the hospital or outpatient department to which they regularly refer their cases. In these meetings each practitioner demonstrates his own patient, which is then discussed by his colleagues and the consultant. The choice of which patient to show is left to the participants themselves, but the consultant encourages them to bring all types of cases and particularly patients with problems, for which the practitioner wants advice and help, rather than rare curiosities.

This method has many advantages. The most important is that it takes the practitioner out of his isolation and gives him an opportunity to demonstrate cases to his colleagues and teachers in a similar way as medical students and hospital interns do to their colleagues on the staff. It further gives the practitioner an opportunity to force the specialist into a discussion of the specific problems about which he wants his help. If the practitioner sends such a patient to the outpatient's department, he will usually receive a letter, but he is not given the opportunity to discuss this letter or to ask further ques-

tions. When the specialist is "on the spot" however, the consultation is not only of advantage to the patient, but the ensuing discussion is simultaneously benefiting the practitioner.

Incidentally, this method has the further advantage that it gives the specialist a way of seeing some types of cases which he would otherwise rarely see. It also forces him to look problems straight in the face from which he might otherwise try to escape.

In Israel this method has been introduced by Drs. Gottfried and Shapira at the outpatient department in Raananah. Similar sessions have since taken place in Ber Sheba under Dr. Shatal. The author had the privilege to act as consultant in some of these sessions and was confirmed in his conviction about the usefulness of the procedure. This is indeed an example of true integration of teaching and practice which deserves wide application. It has also met with great appreciation from the patients.

In some hospitals attempts have been made to integrate the medical practitioner in staff meetings when cases are demonstrated. In current hospital practice such a staff meeting or "grand round," begins with the presentation of a case by the house physician or surgeon, after which the older men give their comments. Experiments have been made here and there with a different system: The medical practitioner, who saw the patient in his home and sent him in, is the first speaker at the presentation. He gives the circumstances, the history, and his findings of the case, up to the point where he decided to refer the patient to the hospital. The house physician is the second speaker. In this way the practitioner is made to feel that he "belongs." The knowledge that he may be asked to participate in the demonstration of a

case will spur him on in the way he examines and treats all his patients. Similarly it will stimulate him to follow up patients after they are dismissed from the hospital, if he is being included in the follow-up system of the hospital.

#### **A postgraduate medical school for general practitioners**

With the increased importance of postgraduate teaching, the question has naturally come up whether our teaching hospitals and medical faculties can be expected to carry the burden of this additional task. It is the author's opinion that a good medical school has to devote so much of its activities to undergraduate teaching and to research that it is impossible to give it a third job. It cannot be expected that university professors and their teaching staff, who are already overburdened by the ever increasing load of undergraduate teaching and clinical research, can function adequately as postgraduate teachers. Postgraduate teaching, therefore, should preferably be carried out in and directed from hospitals or hospital departments which are not primarily associated with the teaching of students. Special appointments should be made and hospitals should be found which can (if necessary after reorganization and improvements) be trusted with the task of postgraduate teaching. These hospitals should specialize in the specific aspects of the postgraduate teaching of practitioners, type "B," as outlined above. This means a close liaison between the doctor's office and the hospital and a constant supervision so that the members of the hospital staff do not become too exclusive specialists. Preferably they should have spent some time in general practice themselves. Much of the teaching in these hospitals should take place not

only in the wards, but at least as much in the outpatient's department or in the practitioners' own offices. In addition both the junior and senior staff members of such a hospital could circulate on fixed days to the periphery for sessions with the country practitioners.

This does not mean that a postgraduate teaching hospital should be without university or medical school connections. On the contrary, the university can do valuable work by establishing the standards and by controlling the level of the teaching and research in such a new center. There is however one danger of which such a postgraduate school should be constantly aware. It must not fall into the trap of becoming a place where general practitioners are trained to leave their job to become specialists. The training of specialists is an entirely different field of activity which is at present integrated in the work of the regular medical school, and it should remain there. Instead the postgraduate school as we see it must devote its main energy to the bringing—and keeping up-to-date—of the functioning practitioners. Such a school, once developed, could also take

upon itself the task of championing the right of the family doctor to be recognized as a highly valuable member of our modern medical corps.

#### **Necessity of research in teaching methods**

Postgraduate teaching, a by-product of hospital and university activities in the past and present, is rapidly becoming a subject of major importance in our days. We are confronted with the necessity of creating an organization to make this available to every doctor, to work out the methods it requires and to find the men to carry it out. To fulfill this task we should be aware that our approach is not yet based on long experience. Until we can substantiate our views and methods by sound empiricism, a certain amount of time and opportunity will have to be given to experimentation. Different methods should be given a chance, and the results verified, not only by listening to the opinion of hospital doctors, but also by inviting those that are most concerned, namely the practitioners themselves, to give their judgment, criticism and suggestions.

## Editorials and Comments

---

### Foreign Students, Teachers and Physicians in the U. S. 1954-55

**I**N a recent report entitled "Open Doors," the Institute of International Education<sup>1</sup> brings together the results of three surveys it conducted in order to get a comprehensive statistical picture of the almost 40,000 persons from all parts of the world who were in the U.S. for purposes of higher education in the fall of 1954.

Of the 34,232 foreign students, 9,838 came from the Far East, 8,446 from Latin American, 5,199 from Europe, 4,416 from the near East and Middle East, 4,655 from Canada and 1,234 from Africa. Medical students made up only 8 to 10 per cent of the students from the various areas but engineering students made up 18 to 36 per cent and students of the humanities made up from 10 to 28 per cent.

There were 635 foreign scholars (professors, instructors, lecturers and graduate assistants) serving as visiting members of our college and university faculties. Though they came from 50 countries, Europe provided 336 of them, the Far East 129, Latin America 62, Canada 48, the Near and Middle East 29. The chief fields of interest of these scholars were the natural and physical sciences (31 per cent), the humanities (23 per cent), medicine (22 per cent), the social sciences (11 per cent), engineering (7 per cent), education (4 per cent), and agriculture (2 per cent).

The 5,036 foreign physicians training in American hospitals as interns and residents came from 84 countries, 1,438 coming from the Far East, 1,229 from Europe, 1,206 from Latin America, 545 from the Near and Middle East, and 520 from Canada. Of the 5,036 foreign physicians 1,761 (35 per cent) were serving as interns, 3,275 (65 per cent) as residents. Most popular among the residencies was general surgery (663), general medicine (506), obstetrics and gynecology (281), pathology (220), pediatrics (221), psychiatry (195), anesthesiology (183), internal medicine (157), radiology (124), otolaryngology (92) and orthopedics (92). The hospitals of New York State reported 1,186 foreign interns or residents. Other states reporting large numbers of foreign physicians were Ohio (424), Massachusetts (405), Illinois (396), New Jersey (348), and Pennsylvania (262.)

The Institute of International Education is to be congratulated on this comprehensive report on America's foreign academic population. If there were any doubts about the important contribution the United States is making to international education this report should go far to dispel those doubts.

To obtain a complete picture of the international education exchange at the college level and above we must add the 8,219 U.S. college students found studying abroad in the various fields of interest (medical students totaled 1,728 or 20 per cent of this group in 1954-55) and over 1,000 U.S.



faculty members were visiting abroad on educational assignments in 1954-55.<sup>2</sup>

Omitting all teenagers and high school teachers, all persons brought to this country for short visits by the U. S. government and all persons coming here for on-the-job training in business or industry, the total exchange of students and faculty in connection with institutions of higher education is over 49,000 a year with approximately 40,000 coming to the U. S. and 9,000 leaving it for study abroad. D.F.S.

---

1. KENNETH HOLLAND: *Open Doors*.—"A Report on Three Surveys: Foreign Students, Foreign Faculty Members, Foreign Doctors in the United States, 1954-55," Institute of International Education, 1 East 67th Street., New York, 1955.

2. "United States Students Abroad—A Report on the Results of the 1954-55 Survey of U. S. Citizens Studying Abroad," Institute of International Education, 1 East 67th Street., New York, 1955.

## **An 'Injustice' to Medical Teaching**

Reprinted by permission from the *Minneapolis Star*, February 10, 1956

To the Editor: Dr. Alvarez's column Feb. 1 has been called to my attention and I should like to comment on it.

Dr. Alvarez quite properly deplored a too great reliance on laboratory tests, rather than history and observation, in medical diagnosis. He goes so far as to imply, however, that laboratory tests are seldom needed and that the medical teachers of today are basing their teaching mainly on tests and very little on history and bedside observation.

To anyone in close contact with the teaching hospitals of the United States this implication is a manifest injustice. The capable clinical teachers, of whom there are a great many, are constantly stressing to their students, interns and younger doctors who look to them for training, the primary role in diagnosis of history and careful observation.

At the same time they emphasize the necessity of suitable laboratory tests to supply the missing pieces in the diagnostic puzzle, or to confirm the diagnosis that has been suggested but not yet proven by the history.

The proper history and physical examination should always come first as they generally indicate what laboratory or X-ray procedures are necessary to confirm or amplify the tentative initial diagnosis, and to insure against mistakes, insofar as possible. Thus the laboratory tests are essential in complementing the well taken history and the doctor's careful observation.

I am sure that Dr. George Pickering, whose article prompted Dr. Alvarez's remarks, would agree with this view. Professor Pickering's unit at St. Mary's hospital in London has accomplished outstanding results in the proper synthesis of clinical and laboratory work.

In thinking about medical diagnosis in the mid-20th century one must bear in mind that the patient's story and the art of observation have always been available to the physician from the dawn of medical history, but that the difference in understanding of disease and consequent efficiency of diagnosis in 1956 as compared with 1900 is as day and night,

and this difference rests mainly on what the laboratory had added.

It is important to emphasize this as it would be highly unfortunate if people were to assume from Dr. Alvarez's article that they ought to attempt to convince their respective doctors that laboratory work is expensive and unessential and that they would rather not have it done.

The physician in charge of the case must have full discretion in obtaining the genuine assistance of laboratory tests in his diagnosis and management of the patient, otherwise the patient's cause will unquestionably suffer.

It is curious that Dr. Alvarez, with his long background of experience at the Mayo clinic, where laboratory medicine has been used to such excellent advantage in diagnosis, should nevertheless feel that it has such a relatively small place.

It is also difficult to understand his implication that \$300 is an average figure that one might have to spend on laboratory tests.

While this figure might be reached or even exceeded in complicated, exceptional situations, a much more reasonable figure would usually be less than one-third of what he indicated.

One should not confuse the problems of recognition of the patient's difficulty and the inability to help it. The physician may recognize at the outset that, as Dr. Alvarez put it, "a woman is slowly going insane or dying of a broken heart," but despite the doctor's sympathy there may be all too little that he can do.

When he has done his best to encourage and advise, the wise physician also makes sure, by means of appropriate laboratory tests or X-ray, that the patient is not suffering at the same time from some disease for which something can and ought to be done, such as anemia, infection, ulcer or cancer.—C. J. Watson, M.D.

*Editor's Note: Dr. Watson is head of the division of internal medicine at the University of Minnesota Medical School.*

## Our Readers Write

*Dear Editor:*

Your editorial in the January 1956 issue of the Journal of Medical Education concerning student loans prompted this letter.

It may at first seem strange that there are unused funds on one hand and unmet demands for medical student loans on the other. There are many factors, however, which contribute to this. There are loan funds which are so poorly publicized that they are little known to the student; SAMA hopes to make knowledge of some of these available to the students shortly.

These hidden funds, however, are few. The restrictions which govern the majority of the loan funds place the most severe limitations on their distribution. The student must be from a certain town, county, state,

or school to be eligible for most of the available loans. Too many loan funds require from one to eight endorsers or co-signers, which can be difficult to impossible for an indebted medical student to obtain. Some loans have strings attached, such as neurology or general practice, for example. There are those which severely limit the amount that any one student can borrow. Others are strict short term loans, which is ridiculous.

The many requests for loans and loan information that we receive at SAMA office serve to remind us that there is a definite demand for medical student loans, even though this demand has been met in certain schools and for students who fall in certain categories. In his article in your recent Journal on the "Adaptation of the Student to Medical School," Dr. Robert Glaser points up the increasing financial strain on medical students and its effect on his learning abilities. We heartily second this concern. And to epitomize the reasons for our concern about student finances, we occasionally run across such items as the advertisement recently placed in a midwestern physician's bulletin by a medical student which offered 8 per cent interest for a loan.

The Student American Medical Association Foundation was established to make available accessible loans to medical students in all schools, regardless of their geographical origin. It also has a prime purpose to widely publicize to the high school and college students the availability of this and other loan funds. We hope that this may prove encouraging to many able students considering the study of medicine who are dubious of their ability to meet the high costs of such an education. Coming from the medical student group itself, this should prove especially helpful.

I cannot close without a word of congratulations and thanks for your Journal's remarkably understanding symposium on that creature so elusive to discription, the medical student.

Sincerely yours,  
John A. Oates Jr., Chairman  
Student American Medical Association  
Foundation

*Dear Editor:*

May I use your column to explain the attitude of the National Fund for Medical Education toward the need for enlisting public support for the medical schools and the promotion of Medical Education Week as a device for stimulating interest in and awareness of the role of the medical schools in the nation's health, productivity and security?

First, let me assure the medical profession that the NFME has no intention of de-emphasizing its program to obtain annual corporate support. Nor does it contemplate at this time any door-to-door public appeal for dimes and 50-cent pieces. However, the fund does believe that corporate contributions will rise in direct ratio to public understanding and public support and for that reason it welcomes the opportunity to join with the American Medical Association and the American Medical Education Foundation and its affiliated organizations in an effort to tell America the dramatic story of medical education.

Let us admit that \$10 million, even in these days, is a lot of money to raise. To raise it requires, among other things, widespread organization, national promotion and education and an army of volunteer workers—even for those causes that have strong emotional appeal, that provide services on the local level, and that have been in existence for many years. To raise it for the “operating budgets” of 81 medical schools—that provide local services in only 57 cities and whose functions are virtually unknown to the majority of people—requires still greater effort.

Let us admit too that it is quite unlikely that \$10 million can be raised annually by just the AMEF and the NFME. After five years we find industry contributing at the rate of slightly over \$1½ million and the medical profession at \$1.1 million. What sudden miracle can be expected to raise these totals sufficiently in a year or so to produce the \$10 million needed? Realistically, nothing . . . though it is reasonable to look forward to a steady modest growth. The answer lies in the fact that this is not a job for the medical professions and industry alone but for the public as well. The medical schools serve the people, industry, the government, everyone. And everyone should be given an opportunity to do his share.

This is in keeping with the mandate implied by Congress when it granted the fund a Federal Charter. The responsibility of the NFME and the AMEF was greatly broadened by that action, for in effect it was an expression of the will of Congress that the medical schools of the country be supported by private means rather than Federal subsidy.

Medical Education Week then is a planned step for meeting the first requisite in obtaining public support—viz., public understanding. It is an attempt to establish a brief period when public attention can be focussed on the problems and the needs as well as the contributions of the medical schools to the national welfare. Too, MEW will provide an opportunity to correct many of the misunderstandings and false rumors that are prevalent about medical education in America. It will provide an opportunity, as the AMA says, to tell “what’s up with our medical schools.”

Medical Education Week will provide the medical profession, the medical schools and all individuals working to strengthen the nation’s medical schools with a national umbrella of education to support their efforts. If we all work together . . . in a unified effort, on a unified front, we can and we will make the public understand that “Medical Education Keeps America Healthy.”

With 200,000 doctors, 71,000 members of the Woman’s Auxiliary of the A.M.A., 81 medical schools and their 28,000 students, and 2,500 volunteers of the National Fund, we have the manpower to do the job. Let’s do it.—  
E. J. ADE, *Fund Raising and Public Relations Director, National Fund for Medical Education.*

# NEWS DIGEST

## **Education, Licensure, Congress**

Approximately 450 physicians and administrators attended the 52nd Annual Congress on Medical Education and Licensure held February 11-14 in Chicago, sponsored by the American Medical Association's Council on Medical Education and Hospitals, the Federation of State Medical Boards of the U. S. and the Advisory Board for Medical Specialists. Problems concerning the education and certification of the nation's physicians occupied the four day session.

The first day, February 11, dealt with graduate medical education, with the morning devoted to reports and papers and the afternoon to discussion of the morning's papers. On the second day the morning was devoted to Dr. Robert A. Moore's presidential address and the essentials of a residency training in general practice. Opening the afternoon meeting of the Federation of State Medical Boards of the U. S., Dr. M. H. Crabb, secretary of the Texas Board of Medical Examiners, discussed reciprocity and interstate endorsement. Dr. Crabb suggested that means be found for guaranteeing that any physician who receives a license to practice in one state should be free to practice in any other state without further examination.

## **Report on Specialists**

The fact that medical specialists are tending to move into smaller communities was brought out by Dr. H. G. Weiskotten, chairman of the Council on Medical Education and Hospitals of the AMA, on February 13. Dr. Weiskotten was reporting on a study of the present status of 1945 medical school graduates. He has been making similar surveys for the past 30 years to find out what kind of practice doctors enter and where.

"The importance of ready availability of qualified specialists to high standards of medical care for the American public has been repeatedly emphasized," he said, "and the concentration of specialists in the larger communities repeatedly criticized . . . it appears clear that the services of specialists are becoming more readily available to the physicians and the public living in smaller areas." He also pointed out that the preparation of specialists for the practice of their specialty is a great deal more adequate than was formerly the case.

## **Clinical Faculty and Private Practice**

In the discussion of clinical teachers and their private practice of medicine the results of a medical school questionnaire and a medical society questionnaire were presented as well as a summary of legal opinion.

Dr. Joseph Hinsey then interpreted the problem as it concerns medical school administration. He included in his paper the following statement approved by the Executive Council of the Association of American Medical Colleges at its last meeting February 10:

"The teaching institutions which have the function of preparing the future generations of physicians should be encouraged to secure the services of full-time teachers and investigators under any reasonable plan satisfactory to the staff members and the school that will strengthen and improve the quality of medical education. They should have the support of the profession, the universities and hospitals in their endeavor to maintain the quality of teaching which, in turn, will insure a high level of health services for the future. The teaching centers associated with medical schools should be concerned with providing patient care of the

highest standard and in doing so in an ethical manner they should be free from hampering regulations and censure by the medical profession. The profession and the teaching institution should work together to encourage legislation which will not restrict the teaching center in performing their essential functions in a modern society."

The afternoon of the third day, February 13, opened with a paper by Dr. Russell Myers on "A Critical Look at Medical Education." Five experimental approaches in medical education were then discussed. The session closed with a paper by Dr. Harvey B. Stone on "Filling the Gap Between Academic Medicine and Practice."

Tuesday, February 14, though devoted largely to medical licensure problems included a report by Dean William E. Cadbury on "Progress and Experimentation in Premedical Education." He described plans now in operation experimentally whereby selected courses in high school are up-graded and given college credit, and selected students are permitted to enter college after only three years of high school work, receiving a 12th year high school certificate after successful completion of their first year in college.

The Federation of State Medical Boards after prolonged discussion and revision approved the report of a committee headed by Dr. George R. Buck of Denver on "Essentials of a Modern Medical Practice Act."

### **Army Physicians, Dentists, Promoted**

All Army physicians and dentists in the grade of first lieutenant who have had at least one year of professional experience will be advanced to the temporary grade of captain within the next two months.

The advancements will affect an estimated 1,100 medical and 500 dental first lieutenants. Starting in April young doctors and dentists entering the Army will receive initial grades of captain if they have a year or more of professional experience.

### **MEND News**

The scope of military problems arising from the presence of communicable diseases was reviewed during the MEND Symposium on "Infectious Disease Problems" held during February at the Great Lakes Naval Training Center's Medical Research Unit. A discussion on "Bacteriological Warfare Defense Measures" is being copied for distribution to medical colleges.

The symposium on "Radiobiology" to be held April 9-11, covering the scope of effect of radioactive materials on human tissue, will be able to accommodate only a limited number of attendants. Reservations should be made as soon as possible with the National Coordinator, MEND, Bureau of Medicine and Surgery, Department of the Navy, Potomac Annex, Washington 25, D. C.

### **Tobacco Research**

A third allocation of \$500,000 to continue support of research by independent scientists into all phases of tobacco use and health has been announced by the Tobacco Industry Research Committee. This increase brings the tobacco group's research fund allocation to \$1,500,000.

### **New Research Center**

Parke, Davis & Company is planning to build a new medical research center costing approximately \$10 million.

The aim of the center will be to make greater progress in research on cancer, cardiovascular disease, mental disorders and virus diseases, in addition to other major health problems.

### **People 'Like, Trust' Doctors**

Americans have a real liking for their own doctors and doctors in general, a survey made by the American Medical Association reveals. The purpose of the survey was to determine what might be needed to improve doctors' services, and results indicated that the public has a higher



opinion of doctors than doctors do themselves.

People like and want from their doctors sympathy, patience and understanding. They criticize cost of care (though seldom specifically blame the doctor for this) and lack of time. Most Americans have their own family doctor and like him. They are a little more critical of doctors in general, but 93 per cent find doctors "likeable."

The survey is based on interviews with 4,000 people selected to match the proper age, economic and geographical proportions of the total U. S. population. The questions were formulated from preliminary discussion with the public and physicians and from current literature.

Eighty-two per cent of Americans have family doctors. Ninety per cent of rural farm dwellers have their own physicians and high percentages are also found among white collar workers, middle-aged, middle income, college-trained people, and central state residents.

While two-thirds of these people once had other personal physicians than their present one, their reasons for changing doctors were nearly always because the patient or doctor moved. Only one-twentieth say they changed because they lost confidence and only two per cent because they had "found a better doctor."

Doctors were asked their feelings about themselves and other doctors. Their agreement that some of the listed complaints about doctors were true, ranged as much as 20 per cent above the public's.

### **Esso Grants**

The Esso Educational Foundation has granted \$75,000 to the National Fund for Medical Education. A total of \$99,900 was also contributed to 10 institutions for research projects in the physical sciences.

### **AAMC Receives Grant**

The Josiah Macy Jr. Foundation has made a grant in the amount of \$10,000 yearly for three years, to the

Association of American Medical Colleges in order to enlarge the international scope of the Journal of Medical Education. The grant will be used primarily to facilitate prompt publication of articles from other countries, and to widen the contacts between the Journal and medical educators from other parts of the world.

### **Fund Gives \$2,657,434**

Grants amounting to \$2,657,433.90 were awarded to the nation's 81 medical schools in 1955 by the National Fund for Medical Education.

Fifty-eight per cent was contributed by corporations, through the Fund's Committee of American Industry, and the balance by physicians through the American Medical Education Foundation.

This is the largest annual award in the Fund's history. Each of the 75 four year schools received a lump sum of \$15,000 plus \$30 per undergraduate medical student. Each of the six two year schools received \$7,500 plus \$30 per student. Added to these grants were the gifts of individual doctors to designated schools.

Fund grants are unrestricted except that they cannot be used for building purposes.

### **Health Leaders Gather**

Prominent representatives of the medical and para-medical professions took part in Marquette University's 75th anniversary conference January 23-26, on "Interprofessional Cooperation for the Improvement of Our Health and Welfare."

Members of the speakers panel were: Dr. Robert A. Moore, vice-chancellor, Schools of the Health Professions, University of Pittsburgh, and president of the Association of American Medical Colleges; Dr. Robin C. Buerki, Executive Director, Henry Ford Hospital; Dr. Stanley E. Dorst, dean of the College of Medicine, University of Cincinnati, and former president of the Association of American Medical Colleges; Dr. Howard A. Rusk, chairman, department of physi-

cal medicine and rehabilitation; New York University-Bellevue Medical Center; Dr. Maynard K. Hine, dean, School of Dentistry, Indiana University; and Dr. Herman G. Weiskotten, dean emeritus, Syracuse University College of Medicine and chairman, American Medical Association's Council on Medical Education and Hospitals.

The four-day conference, in panel and group discussion, considered ways and means for greater effectiveness in such matters as establishing boundaries between specialists, controlling costs of health programs, raising and controlling funds for medical research and medical education.

#### **Schering Award Competition Opens**

The Schering Award has begun its eleventh annual program for medical students in the United States and Canada. With the aim of fostering research and the communication of knowledge in the medical profession, the Schering Award Committee invites students to participate by selecting one of three suggested subjects and submitting papers. Both a \$500 first prize and \$250 second prize are offered for each of the three subjects.

Literature and entry forms are distributed in the medical schools. Students interested in participating, either individually or in teams, are expected to submit their entry forms before July 1, 1956 and manuscripts must be postmarked not later than September 30, 1956.

#### **Psychology Conference**

A conference on psychology in medical education will be held in New York March 12-14. The meetings will be attended by more than 50 invited psychologists from faculties of medical schools, as well as representatives of the American Psychological Association, the Association of American Medical Colleges, and the Veterans Administration. The program will include a resume and discussion of a job analysis report, as well as work groups on teaching, research, clinical service and selection and administration. Inquiries for additional information may be addressed to Dr. Irwin J. Knopf, Department of Psychiatry, State University of Iowa, Iowa City, Iowa.

#### **Lederle Fellowships**

The Lederle Laboratories Division of the American Cyanamid Company has announced that it is making available to medical schools throughout the United States and Canada "Lederle Medical Student Research Fellowships" for the year 1956.

These fellowships, in amounts not exceeding \$600 per year for any one individual, are intended to relieve in part the financial burden of students who wish to spend their summer vacations doing research in the basic medical sciences. Selection of students to receive such awards will be made by the dean of the medical school or by the constituted committee of the faculty charged with such selections.

## College Briefs

---

### **Albany**

A grant of \$203,812 has been received from the Public Health Service to be used over the next six years to support the graduate training program in neurology. This award supplements grants totaling \$36,000 which have been received during the past two years from the National Institute of Neurological Diseases and Blindness to train teachers and researchers in neurology.

### **Boston**

A grant of \$69,000 has been received from the Office of Vocational Rehabilitation of the United States Department of Public Health. Education and Welfare for the training of professional persons to work with the disabled. This grant provides for the appointment of additional faculty members in the field of rehabilitation and the awarding of traineeships for a selected number of persons.

### **Chicago**

Louis Block, formerly president of Blockson Chemical Company, Joliet, Ill., willed \$17 million to the divisions of biological sciences and physical sciences for basic research and advanced study. Mr. Block died in September 1955. His bequest stipulates that the faculty is to have exclusive control of the fund.

### **Emory**

Changes in administration, effective July 1, have been announced. At that time Dr. R. HUGH WOOD, dean of the medical school and director of the university clinic, will devote full time to his work as clinic director. The clinic has been expanded with a \$1 million addition scheduled for completion this spring.

Dr. ARTHUR P. RICHARDSON, director of the division of basic health sciences, will become dean of the

medical school, and Dr. CARL C. PFEIFFER, chairman of the department of pharmacology, will become acting director of the division of basic health sciences.

### **Florida**

Dr. SAMUEL PRESTON MARTIN, formerly of the Duke University school of medicine, will begin his duties as new head of the department of medicine April 1. He also will be coordinator of the J. Hillis Miller Health Center Study which is supported by the Commonwealth Fund.

### **Georgetown**

A neurology training grant of \$189,645 from the National Institute of Neurological Diseases and Blindness, of the Public Health Service, has been received. The grant will be used over a five-year period and will be administered by Dr. FRANCIS M. FORSTER, dean of the medical school and professor of neurology.

### **George Washington**

A new two year premedical technology curriculum has been set up to prepare students to meet the registry requirements of the university hospital for training in the medical technology profession. Preparation includes the required science courses in the curriculum, English, foreign language electives, literature or social studies and physical education. An associate in science degree will be awarded at the conclusion of the program.

### **Illinois**

Thirteen research grants totaling \$76,039 have been received on the professional college campus. Among these was a grant from Mr. and Mrs. Titus Haffa of Chicago, for \$25,000 to the department of surgery for equipping a laboratory and for research in

artificial artery transplants; and \$21,467 granted by the National Institutes of Health to the department of pathology.

### **Medical Evangelists**

The Ford Foundation has granted \$187,300 to aid the teaching hospitals in their extension of service to the public. Grants will be awarded on the basis of patient days of service provided by the hospitals, and the number of births in each.

### **Meharry**

President Harold D. West has been elected a trustee-at-large of the National Society for Crippled Children and Adults.

### **Mississippi**

Dr. FLOY JACK MOORE has been named professor of psychiatry and chairman of the department of psychiatry. He is currently assistant professor of psychiatry and psychology at Baylor University, Houston, Texas, and will assume his new duties on June 1.

### **Missouri**

A total of \$16,900 has been granted by the Public Health Service. The amount of \$14,500 will be used on research on the effects of cations upon cardiac glycogen synthesis. The remaining \$2,400 will be used for a grant to be known as the Medical Students Part Time Research Fellowship. The students, in teams of two, will be selected to work in four major departments under the direction of the department chairman.

### **NYU—Bellevue**

A long-range study program, designed to determine the methods by which a medical center can best relate its program of medical teaching, research and patient care to the current and future needs of the community, has been launched. Supported to a large extent by a grant from the Commonwealth Fund, the program will be correlated by a newly formed study group with Dr. ALLEN

O. WHIPPLE, educator and surgeon, serving as consultant.

This year the school is one of 10 accepted for permanent full affiliation with the Medical Education for National Defense Committee (MEND). Coordinator for the program will be Dr. ARTHUR C. FOX, fulltime assistant in medicine and a researcher in the department of medicine.

A new prosthetics rehabilitation education program in which the schools of engineering and the post-graduate medical school will cooperate, began this month. The program is for physicians and surgeons, prosthetists and therapists concerned with artificial limbs and other replacement devices for amputees. A similar program is also being organized at the University of California, Los Angeles.

Dr. SIDNEY FISHMAN, project director, explained that this series is the result of the recognition that "rehabilitation of the nation's growing amputee population is a medical-surgical, psychological and engineering problem that demands the pooling of specialized knowledge."

### **Northwestern**

Dr. DERRICK VAIL, professor and chairman of ophthalmology, is touring United States army hospitals in the European command as a consultant in ophthalmology.

The tour is part of the overseas consultant program which consists of lectures, discussions, conferences and ward rounds.

### **Pennsylvania**

Dr. ROBERT D. DRIPPS, professor and chairman of the department of anesthesiology has been elected president-elect of the Association of American Anesthetists. Association members are interested in teaching and research as well as in the clinical practice of anesthesia.

### **Southern Cal.**

Dr. EDWARD J. STAINBROOK, formerly professor and chairman of the department of psychiatry at the College of Medicine of the State Univer-

sity of New York at Syracuse, has been appointed professor and head of the department of psychiatry, effective July 1. Dr. Stainbrook will also be chief of psychiatric services at Los Angeles County Hospital.

#### **SUNY—Brooklyn**

What makes a desirable candidate for medical school, and what are the educational and personal characteristics needed by the practicing physician, are subjects discussed in a booklet written under the auspices of the Student Personnel Department.

The booklet is edited by Dr. DAVIS G. JOHNSON, assistant dean for student personnel, and contains four articles by Syracuse physicians who are members of the admissions committee. Free single copies are available on request.

#### **Tennessee**

The division of obstetrics and gynecology has been awarded a grant of \$28,994 by the Public Health Service for continuation of a part of the program of the Memphis Cancer Survey Project.

#### **Texas—Southwestern**

The Welch Foundation of Houston, Texas has given \$50,000 to the biochemistry department for the study of protein metabolism and \$8,700 to the pharmacology department for the study of histamine metabolism.

Work has been started on the \$3,500,000 clinical science building.

#### **U. of Washington**

Gifts totaling \$1 million have been received to endow a neurology institute. The new institution will be named the Beaumont-May Institute of Neurology in honor of the donors. It will study chronic brain disorders and treatment. The Public Health Service has awarded \$106,925 in research grants and the American Cancer Society has awarded an institutional grant of \$25,000. Also received were two grants from the National Foundation for Infantile Paralysis totaling \$23,877.

#### **Wayne**

The Department of the Army has issued approval giving the school use of the Detroit Arsenal radiographic laboratories for cancer research. It is the first time the army has extended such an installation to a civilian agency. Most important piece of equipment at the installation is a 15 million volt betatron.

#### **Yale**

Dr. C. N. HUGH LONG, chairman of the department of physiology is making an eight month tour of research centers in Europe. He will lecture on adrenal glands this spring at the International Congress of Physiologists in Brussels, and is also scheduled to give the Halliburton Lecture at King's College, University of London, and a lecture to the Endocrine Society of Great Britain. He has also been invited to lecture and meet with scientists in Yugoslavia, France and Italy.



## The Bells Are Ringing

In cities, towns and villages all over America, the ringing of church bells one day in April will mark the launching of the annual Cancer Crusade of the American Cancer Society. At the same time, in many doctors' offices, the staccato ring of door and telephone bells will mark the success of a major objective of the Society.

"Fight Cancer with a Checkup" is the American Cancer Society's immediate, short-range answer to the terrible toll of lives taken each year by this dread disease. It is to your office that the Society is urging the public to go for the periodic examinations that can mean the early detection and prompt treatment of cancer, and could prevent thousands and thousands of needless deaths.

Achievement of our ultimate goal — the conquest of cancer — will be largely determined by the response to our plea to "Fight Cancer with a Check". This year the Society needs \$26,000,000 to carry on its vital program of education, research and service.

"Fight Cancer with a Checkup and a Check" — a winning combination. With your support and the cooperation of the public, the sound of victory will one day ring through the land.

# American Cancer Society





# Audiovisual News

## "AMA Scientific Exhibits 1955"

**R**EPRODUCTION of selected scientific exhibits of the AMA's 1955 Annual Meeting are contained in a large volume for handy study and reference. Included are photographs of the exhibits which were singled out for awards, certificates of merit and honorable mention, as well as additional exhibits with wide appeal. The visuals and lettering are very adequate for individual study in practically all instances and the volume is very suitable for library addition.

Medical school AV committees considering the utilization of exhibit space for outside exhibits will find the publication helpful in locating and selecting suitable exhibits. It is believed that practically all exhibits are available from the entrants for the minor costs of transportation. Individual inquiries may be made to entrants and further information may be requested of Dr. Thomas G. Hull, Secretary, Council on Scientific Assembly, AMA, 535 N. Dearborn St., Chicago, Ill.

*AMA Scientific Exhibits, 1955*, Grune and Stratton, New York, 784 pp., \$20.

## ETV in 1955

Eighteen educational television stations broadcast a total of 340 hours each week in 1955. Fifty-seven per cent of this programming was live and locally produced. Kinescope and film accounted for 43 per cent of broadcast time.

Dr. Benjamin Spock continued his program for parents. It was shown live over the Pittsburgh ETV station and on kinescope over other ETV stations. Dr. Spock is now on NBC with a similar show.

## New Films Added to MAVI Library

### Anesthesiology on Television

28 min., b&w., sd., 16 mm., 1955.

An edited kinescope recording of two half-hour TV programs. The details of an anesthetic machine are shown and a patient is induced using an intravenous barbiturate and endotracheal intubation. Regional anesthesia is discussed and two blocks (suprascapular and ankle) are demonstrated. A verbal summation of the function of the anesthesiologist outside the operating room is given.

*Producers:* New York University Post-Graduate Medical School Audio-Visual Department; *Narrator:* E. A. Rovenstine, M.D.

### Embryology and Pathology of the Intestinal Tract.....\$7

15 min., sd., color, 16 mm., 1954.

Divided into two parts, the first part shows the growth and development of the intestinal tract of the human embryo from the fourth to the twelfth week. Animation techniques trace the development of the tract in the umbilical cord and follow the pattern of its return to the abdomen. Essential phases of the rotation process are demonstrated by means of clay models. The second part traces anomalies to arrested stages of embryological development. The anomalies shown include Meckel's diverticulum, omphalocele, paraduodenal hernias and volvulus.

**Authors:** Lawrence Chaffin, M.D., and William Snyder, M.D., Los Angeles; **Producer:** Graphic Films Corp., Hollywood.

# **PHARMACOLOGIC STUDY OF METRAZOL (Series)**

3 reels, 54 min., si., color, 16 mm., 1948.

**Sponsor:** Bilhuber-Knoll Corp.; **Author-Producer:** R. P. Walton, M.D., and O. J. Brodie, Department of Pharmacology, Medical College of South Carolina.

## **Characterization of Depressants (17 min.).....\$2**

Shows the relative depth and persistence of depression in dogs given paraldehyde, pentothal sodium and phenobarbital sodium sufficient to produce light surgical anesthesia. The effects of these and other common hypnotics are shown on a depth-recovery time chart using in a modified form Guedel's signs and stages of anesthesia.

## **Circulatory and Respiratory Effects (20 min.).....\$2**

Dogs are used to demonstrate the vasoconstrictor and respiratory effects of Metrazol under conditions in which arousal is not manifest. Pneumographs, recording tambours and an air volume measuring device are used to show respiratory effects. Electrocardiographic tracings and the Cushny heart levers are used to demonstrate the action of Metrazol on the heart *in situ* (with both vagi cut and barbitol as the anesthetic). Extreme cyanosis, dilation and ECG irregularities are shown.

## **General Description (17 min.).....\$2**

Shows by means of demonstrations the physical and pharmacologic properties of Metrazol. The excitant action of Metrazol on the central nervous systems of frogs is compared with that of strychnine both before and after brain transection. The arousing action under conditions of near or light anesthesia is demonstrated in dogs and mice, and the change of pattern of electroencephalographic tracing taken during pentobarbital anesthesia shown.

## **Resection of Abdominal Aorta for Arteriosclerotic Occlusive Disease.....\$2**

18 min., si. (run at sd. speed) (cannot be used on silent projector), color, 16 mm.

Demonstrates the method of diagnosis,

and operative technique in resecting the abdominal aorta and upper portions of the right and left common iliac arteries. End-arterectomy is used to free the proximal and distal arterial thrombi. After the aorta is resected continuity is re-established by suturing an aortic bifurcation homograft in place. The gross pathologic material is shown.

**Author:** Harwell Wilson, M.D., division of surgery, University of Tennessee College of Medicine; **Photography:** John H. Dickson.

## **Termination for the Bile Duct.....\$7**

16 min., sd., color, 16 mm., 1955.

Shows by means of colored drawings and partly cleared untraumatized specimens the relationship of the course of the duct, the papillary sphincter and the "common channel." Duct termination in choledocholithiasis and in pancreatitis is also shown as well as a visualization of interdicted reflux when an ampulla is present as a common channel within the papilla.

**Sponsor:** Davis Geck, Inc.; **Producer:** Al Kane Productions, Inc., Philadelphia; **Author:** Julian A. Sterling, M.D., Graduate School of Medicine, University of Pennsylvania.

# **Summaries of Film Reviews**

## **Judet's Arthroplasty of the Hip**

13 min., sd., color, 16 mm., 1953.

Following X-rays of osteoarthritis of the hip, animation shows the Judet method for affixing a femoral head made of plastic. In an elderly male patient, surgical exposure of a diseased hip joint is performed. A male model demonstrates the maneuver for releasing the head from the socket. The surgeons perform the procedure on the patient. Half the femoral head is excised; the neck is drilled through the great trochanter. The cap is tapped on to the bony base. The acetabulum does not require remodeling. Reduction is demonstrated on the male model, then realized on the patient. Closure is done, followed by traction and leg suspension with the aid of Steinmann pins.

This historically important film shows one stage in the development of hip arthroplasties, as performed by a skilled orthopedic surgeon. Recent experience has altered current methods toward an intra-medullary pin to replace the through and through pin shown here,

and toward different types of heads. The film is presented with clarity, skill and precision, apart from the disturbing substitution of a left leg for the operated right one in the terminal sequence. Use of a live model and the simple animation are helpful and well conceived.

For residents in orthopedics or surgery, the film represents a record of an important stage in the active evolution of hip arthroplasties. D.S.R. with K.U.M.C. Panel, November 1955.

**Audience:** Surgical residents (orthopedics).

**Production Data:** **Author:** K. I. Nissen, F.R.C.S.; **Producers:** May and Bakey, and Dr. Brian Stanford at the Royal National Orthopedic Hospital, England.

**Distribution:** British Information Services, 30 Rockefeller Plaza, New York 20, N. Y.

#### **Diagnosis and Office Management of the Arthritides**

28 min., sd., color, 16 mm., 1955.

Dr. Rawls introduces the types of arthritides encountered in office practice. The early stage of rheumatoid arthritis is shown in the hand pathology of four patients; three patients show moderately advanced cases; seven show advanced lesions. Two patients demonstrate Marie-Strumpell rheumatoid spondylitis. Rheumatoid arthritis associated with psoriasis is shown in two cases. Osteoarthritis is demonstrated in early manifestations (two patients) and moderately advanced pathology (five patients). The rare combination of rheumatoid and osteoarthritis is seen. Three cases of subdeltoid bursitis and three of gouty arthritis present diagnostic problems. Dr. Rawls concludes with a spoken summary of current therapy.

As a review of office diagnosis and management, this case atlas film presents valuable clinical material on 31 patients, heavily weighted toward manifestations seen in the hands. The spondylitis and subdeltoid bursitis are almost interruptive of the visual main theme of rheumatism involving the hands. And the relative frequency and importance of the several diseases is not visually proportionate in the film. The author presents the cases, speaks the narration and discusses therapy, and provides the authenticity of a practical clinical essay on film. Cases are selected to show the wide range of pathology encountered; but much of the essential data is heard rather than seen, as may be expected in the lecturer-demonstra-

tor film format. The use of specific trade names is neither offensive nor misused. The accuracy of the scientific data is as reliable as one can expect of a single clinician. Production quality is adequate and individual shots are handsome; but the film is non-analytical pictorially, and unrewarding film-wise.

As a summary of current thinking regarding Dx and Rx of the arthritides, the film will have value to the general practitioner, the resident in internal medicine and the medical student; discussion will be determined by audience and usage. Verbatim narration and discussion notes are supplied, and make a helpful reference booklet. D.S.R. with T.J.R., 1955.

**Audience:** Practitioners, residents and interns, medical students.

**Production Data:** **Sponsor:** Sharp and Dohme, Division of Merck & Co., Inc., Philadelphia, Pennsylvania; **Author:** William B. Rawls, M.D., New York Polyclinic Hospital; **Producer:** Audio Productions, Inc., New York.

**Distribution:** Sharp and Dohme, Division of Merck & Co., Inc., Philadelphia 1, Pa., and area representatives.

#### **The Normal Skull of Infants and Children and Congenital Diseases of the Skull**

(Series No. 3-1A)

50 slides, 4 in color, 2" x 2", with printed commentary, 1954.

#### **Congenital Diseases of the Skull of Infants and Children and Traumatic Disorders of the Skull**

(Series No. 3-1B)

50 slides, b&w., 2" x 2", with printed commentary, 1954.

Both series are Micro X-ray recordings. In series 3-1A there are 15 illustrations of the normal sutures of the skull. The rest are various congenital anomalies of the skull such as craniosynostosis, dysostosis, microcephaly and hydrocephalus. Series 3-1B consists of films on luckenschadel, encephalocele, osteogenesis imperfecta, chondrodystrophy, gargoylism, cephalohematoma and fractures.

The slides project well, are clear and the viewer can easily recognize the specific points the author wishes to demonstrate. The only criticisms are that the letters used to indicate specific areas are too small to read easily and the slide numbers often can not be seen which makes the key sheet difficult to follow. Also some subjects are repeated too often.

These slides are excellent for the teaching of medical students and house officers. They would also be of value as a review for those physicians taking care of infants and children. Harvey White, Thomas Baffes and John A. Bigler, The Children's Memorial Hospital, February, 1955.

**Audience:** Medical students, house officers, pediatricians.

**Production Data:** **Author:** John W. Hope, M.D., Director, Department of Radiology, The Children's Hospital, Philadelphia, Pa.; **Producers:** Micro X-ray Recorder, Inc., 3755 W. Lawrence Ave., Chicago 47, Ill.

**Distribution:** Micro X-ray Recorder, Inc., 3755 W. Lawrence Ave., Chicago 25, Ill. **Sale:** \$15.00 per set.

### **The Valiant Heart**

28 min., sd., b&w., 16 mm., 1955.

Small boy Lee Sawyer's family is introduced while Lee sickens with headache, sore throat, joint pains and fever. Dr. Barnes, the family physician, suspects rheumatic fever, takes a throat culture and admits him to the hospital for specialist Dr. Kendrick's confirmatory diagnosis, and for treatment. The doctors tell the parents of the treatment program and screen the remainder of the family for strep infection. Doctor, visiting nurse, neighbors and family assume their roles as they are required in Lee's long term convalescence. Lee himself carries the primary responsibility, with his mother's loving help and hard work. His teacher volunteers to hold him with his school classmates. Nurse and doctor constantly guide Lee's home care program. A Heart Association meeting provides the basis for parental education in cooperative action. Lee's good prognosis is optimistically presented by Dr. Kendrick. A year after the attack the boy is fully active once again.

This excellent summation of modern noninstitutional home care for a rheumatic fever patient succeeds in conveying a vast amount of information in a casual but moving human fashion. The film should allay parental fears, and it shows well what families must adapt to with a rheumatic convalescent child. It outlines the long term interrelations of professional persons, the family and the community.

For medical students, nurses and social workers the film should be admirably provocative of discussion on institutional and home care problems, on the social, psychological and environ-

mental factors of a grave chronic disease, on family predisposition to other elements concerning rheumatic fever. Each professional person will find a source of real experience within the film, if he permits it. D.S.R. with K.U.M.C. Panel, June 1955.

**Audience:** Lay public, parents, students of medicine, nurses and social workers.

**Production Data:** **Sponsor:** E. R. Squibb and Sons, Division of Olin Mathieson Chemical Corporation, New York; **Writer and Director:** George C. Stoney; **Producer:** Victor O. Solow, MPO Productions, Inc.

**Distribution:** American Heart Association Film Library, 44 E. 23rd St., New York 10 (and local Heart Associations); **Rental:** \$7.25 for 2 days; \$11.75 for 5 days; **Sale:** \$100.

### **Lung Cancer: The Problem of Early Diagnosis**

28 min., sd., color, 16 mm., 1954.

A patient describes his classical case history, based upon which the narrator relates the shocking rise of lung cancer, with suspicion pointing to long-time heavy cigarette smoking as etiology. Diagrammatic growth of the tumor is given reality by a case presentation. Dr. Peter Herbut describes cytological examination. A definite course of diagnosis is shown for an asymptomatic case up to thoracotomy, pneumonectomy, and demonstration of the surgical specimen. Dr. Overholt, Dr. Graham, Dr. Ochsner and Dr. Cameron emphasize key points of diagnosis in summarization.

This excellent film is a blunt document of the nature, diagnosis and surgical management of lung cancer, with a cautious but frank advocacy of cigarette smoking as the probable principal etiology. The film is skillfully made; there are good touches such as the crab-like cancer spreading in the lung tissue, and (for medical students particularly) the glimpses of famous contemporary men of medicine; and the narration has a judicious quality made authentic by the narrator, Dr. Charles Cameron.

This film can be used with profit with any medical audience, for its clarity and forthrightness are exemplary. The impact upon medical audiences will be fortification of suspicion, reiteration of diagnostic procedures and increased surety toward confirmation of the causative role of cigarette tobacco. D.S.R. with K.U.M.C. Panel, December 1954.

**Audience:** Professional groups such as county medical societies, hospital staff meetings, as well as medical students and practitioners.

# THE ANSWER IS IN THE ZERO!



YOU can always be sure a TYCOS\* Pocket Aneroid is accurate as long as the pointer returns *within zero*. This easy visual check can be made after every reading. And, this Pocket Aneroid can be used *in any position*. Weighing only 19 ounces, it is ideal for house calls. Fits in a zipper case that can easily be slipped into your pocket or your bag. The

exclusive hook cuff is designed to fit any adult-sized arm and cannot balloon at the edges. Our 10-Year Warranty allows free readjustments . . . even if you drop it. See this instrument at your favorite surgical supply dealer. Price \$42.50. Made by Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.

\*Reg. U. S. Pat. Off.

*Taylor Instruments* **MEAN ACCURACY FIRST**

**Production Data:** Sponsors: American Cancer Society, Inc., and the National Cancer Institute, U. S. Public Health Service, Department of Health, Education and Welfare; **Producers:** Audio Productions, Inc., Medical Division; **Medical Advisers:** Everts Graham, M.D., Alton Ochsner, M.D., Richard Overholt, M.D., Peter A. Herbut, M.D.; **Narrators:** Charles S. Cameron, M.D.

**Distribution:** American Cancer Society, Inc., 521 West 57th St., New York 19. **Sale:** \$134. **Loan:** State Cancer Societies, **Loan.**

### **The Children**

9 min., b&w, sd., 16 mm., 1952.

The role of UNICEF in the devastated and deprived countries after World War II is sketched: In Indonesia the penicillin attack on yaws; in Thailand and Afghanistan the attack on malaria mosquitoes; in Greece and Morocco the BCG assault on TB. UNICEF's multi-country material support is documented: Australian wool, English leather, American cotton, Icelandic fish oil, Asian rice; all are shown levelled at feeding, clothing and housing the destitute and impoverished. Specific cooperative projects are shown as examples: FAO's milk plants in Yugoslavia, WHO training of health personnel in Paris and Calcutta and health education of mothers and midwives for MCH welfare services, and finally the rehabilitation of war-injured children.

As a rapid and dramatic scanning of a great world project in cooperative and functional good will, this visual essay on UNICEF's work is creditable. Although it is comprised of wild camera footage recorded far and wide across the world, the edited composite with its adhesive of narration communicates very well the stirring challenge of one world with one human responsibility for the health of all—and here for children in particular, for they are tomorrow's citizens.

For all audiences who should know of the scope of UNICEF, this film will effectively outline the great human needs and the organizational attacks upon those needs in the four quarters of the globe. D.S.R., July 1954.

**Audience:** Lay and medical audiences.

**Production Data:** Sponsor and Producers: The United Nations.

**Distribution Data:** Department of Public Information, United Nations, New York, N. Y. **Rental:** \$2.50; **Sale:** \$32.50. (Also available from official distributors.)

### **Gout and Gouty Arthritis**

19 min., sd., color, 16 mm., 1954.

Gout is shown to have an hereditary factor, to occur 95 per cent in males and to have its usual onset at middle age. Chronic gout is seen in pictures and x-rays of tophaceous metatarso-phalangeals, fingers, knees, elbows and feet. Diagnosis is indicated by signs and symptoms, familial history, x-rays, ureteral stone and lab determination of increased serum uric acid. The "miscible pool" of uric acid is diagrammed in relation to its renal excretion. Treatment with colchicine is advocated as the "drug of choice," along with rest, purine food avoidance and high fluid intake. Benemid, an agent which reduces uric acid reabsorption, is shown both to prevent formation of and to reduce tophi, with photographic and x-ray evidence of this latter function.

Within its limits, the film is an excellent and provocative essay on gout. However, acute recurrent gout is virtually ignored, with its striking onset and usually distinctive signs and symptoms. The film concerns itself almost solely with the far less important chronic tophaceous gout, splendid cases of which are seen, and with the uricosuric effects of the rather costly Benemid, to the exclusion of aspirin and cinchophen as other apparently useful agents. Production is quite competent, and the message is visually intelligible; certain important data are, however, heard and not seen, such as side effects of Benemid, and hence are minimized.

For the medical student or practitioner the fruitful and effective use of this film will depend on proper discussion which brings into focus such factors as these related above. In all other ways the film will prove to be a provocative introduction or review. W.H.G., T.J.R. and D.S.R., January 1954.

**Audience:** Medical students, interns, residents, practitioners.

**Production Data:** Sponsor: Sharp and Dohme, Division of Merck and Co., Inc.; **Producer:** Worcester Film Corporation, Worcester, Mass.; **Medical Advisers:** John H. Talbot, M.D., University of Buffalo; Alexander B. Gutman, M.D., Mt. Sinai Hospital, New York, N.Y.

**Distribution:** Sharp and Dohme, West point, Pa., and local representatives, **Loan.**



# Book Reviews

## Clinical Biochemistry

Abraham Cantarow, M.D. and Max Trump-  
er, Ph.D. W. B. Saunders Co. 5th Edition  
1955, Philadelphia, Pa.

The stated purpose of this book is to aid the clinician in making correlations between clinical medicine and the basic medical sciences, especially biochemistry and physiology. To this purpose a wide variety of biochemical and physiological abnormalities are cataloged for a number of conditions encountered in the clinic. Many biochemical and functional tests are described, together with their clinical interpretation. A complete index allows one to find the variation of many chemical factors in a wide number of diseases.

Sections of the book dealing with hepatic function, carbohydrate, lipid and protein metabolism, renal function, hemoglobin and porphyrin metabolism, acid-base balance, calcium and inorganic phosphate, hormone assay and endocrine function are adequately presented in a qualitative descriptive style. Each chapter is organized by first stating the normal situation, changes in specific clinical conditions, hormone effects and miscellaneous conditions leading to variation from the normal state.

A feature of the book that would appeal to some readers and not to others is the paucity of chemical formulae and the quantitative use of applicable chemical laws. For example, this form of presentation allows a qualitative description of acid-base disturbances but does not permit the interpretation of blood pH and  $\text{CO}_2$  data to evaluate the kind and extent of acid-base abnormalities.

An excellent table of normal chemical standards, including values for whole blood, plasma, cerebrospinal fluid, kidney function and liver function tests is included. Much of the chemical data presented is of considerable value to clinicians for problems of differential diagnosis. The book has many cross references and a large number of selected review articles are cited. Only a small

number of articles in the original literature are mentioned.

F. Lee Rodkey, Harvard

## The Physiological Basis of Medical Practice, 6th edition

C. H. Best and N. B. Taylor. The Williams and Wilkins Company, Baltimore, 1955. 1224 pp.

The merits of this substantial text are attested to by the fact that it is now appearing in a sixth edition. It is very largely the work of the junior author, which gives it a coherence rare in these days of multiple authorship. Avowedly written for medical students with the aim of relating physiology to clinical medicine, it includes a considerable amount of comments on disorders of function. The style has a simple and straightforward tone, and tends to minimize academic argument "about it and about."

While most academicians would agree that the tendency to try to keep pure and applied science neatly separated from each other is artificial and unreal, and to the advantage of neither, how much one can be advantageously mixed with the other in any given situation frequently resolves on practical expediency. The time which the medical student has to give to physiology is limited, so that much selection of material is necessary. In the present instance, there are certain fairly serious omissions. There is no formal treatment of muscular contraction, despite the fact that about four-fifths of the body is muscle, and that our lives from moment to moment depend on the activities of muscles; smooth, skeletal and cardiac. Similarly the treatment of nerve conduction is inadequate from the modern point of view. The first discussion of muscle occurs in relation to cardiac function, and is inadequate and so truncated as to be quite confusing. The term *refractory period* is used in two senses on page 189. The caption under Fig. 19.2 contains an error. But aside from what may be mi-

# Stimson — Fractures and Dislocations

By **BARBARA BARTLETT STIMSON, A.B., M.D., Med. Sc.D., F.A.C.S.**

Director, Department of Bone and Joint Surgery, St. Francis Hospital,  
Poughkeepsie, N. Y.; Formerly Assistant Professor of Surgery, Columbia  
Presbyterian Medical Center, New York, N. Y.

*New 3rd Edition.* Students and internes will find this manual to be a quick, dependable guide for every form of emergency treatment. Only established and recognized methods are given, none of which require elaborate technics or detailed operative procedures. For the new 3rd edition the text has been revised and brought up to date throughout.

*New 3rd Edition, 224 Pages. 97 Illustrations. \$4.50*

# Faust — Animal Agents and Vectors of Human Disease

By **ERNEST CARROLL FAUST, M.A., PH.D.**

The William Vincent Professor of Tropical Diseases and Hygiene and Head, Division  
of Parasitology, Department of Tropical Medicine and Public Health,  
The Tulane University of Louisiana, New Orleans

**TIMELY.** Parasitism constitutes one of the major phenomena of the living world, and therefore one of its most interesting and challenging subjects. A highly important phase of parasitology is the broad area involving *animal agents and vectors*, and *their relation to human disease*. Dr. Faust, widely known for his work in this field, presents a full discussion of those parasites which produce diseases, with particular reference to their attacks on and the reactions of the human host. Etiology, epidemiology, pathogenesis, symptomatology, diagnosis and control of this group of infections are given in detail. Ample references conclude each chapter.

*660 Pages. 216 Illustrations and 9 Plates, 1 in Color. 12 Tables. \$9.75*

# Burch and Winsor — Primer Of Electrocardiography

By **GEORGE E. BURCH, M.D., F.A.C.P.**

Henderson Professor of Medicine, Tulane University School of Medicine

and **TRAVIS WINSOR, M.D., F.A.C.P.**

Assistant Clinical Professor of Medicine, University of Southern California, Los Angeles

**NEW 3rd EDITION.** With this authoritative book, students unfamiliar with the subject can acquire a fundamental knowledge of electrocardiography in the most direct manner. The mechanistic point of view is used throughout. The new 3rd edition has been brought up to date in accordance with today's accepted concepts. "Should be included among the valuable texts on electrocardiography"—*Annals of Internal Medicine*.

*New 3rd Edition. 286 Pages. 281 Illustrations. \$5.00*

Washington  
Square

**LEA & FEBIGER**

Philadelphia 6  
Pennsylvania

nor carelessness (surprising in a sixth edition) the opportunity is entirely missed to present the beautifully precise and illuminating modern analysis of nerve-muscle physiology.

Another example of a poor approach is in the chapters on the kidney. Here, after an unnecessarily detailed presentation of renal anatomy, we come to thoughtful consideration of theories of urine formation from Bowman through Cushny (spelled Cushing, p. 445). This is followed by a cursory summary of conclusions regarding renal function based on the clearance studies of the past two decades, but for a description of the clearance methods the reader is referred to the next chapter. Here, under a heading of the pathological physiology of renal disease, is a half-page containing mention of the inulin clearance and tubular transfer tests. Even this short treatment is not free from error, as the inulin clearance in man is given as about four times too large: "Its clearance amounts to around 530 cc. per minute, and under all conditions (e.g., rate of urine flow or plasma concentration) its clearance is equal to the rate of filtration." The student is left with a grossly inadequate approach to a beautifully

logical subject of great clinical importance. He is not helped to reason in modern terms regarding kidney function. Space which might have been so used is devoted to an exposition of the conventional classifications of renal disease which do not aid in understanding the physiology and introduce a number of other problems which are not too well understood. In this particular case, the introduction of "practical" considerations tends to perpetuate the status quo and to obstruct the real application of the newer physiology to the problems of renal disease.

Other defects which the reviewer noticed are in the theoretical presentation of osmotic pressure, which uses an old formulation which is incomplete and more confusing than the modern exposition in terms of activities: in the section on Donnan equilibrium, the last equation in the first column, p. 130, is not true without qualification, and must have confused many students, unless no one reads these sections. In the section on optics, the diagrams are in many cases not discussed specifically enough to be good optics, and neither are they good medicine. Data is not treated statistically: for example in the discussion

## Attractive Binders Now Available



Holds 12 issues  
plus supplements

Preserve your copies of  
The Journal of Medical Education  
for quick and easy reference.

Only \$3.00 each sent Parcel Post in the  
U.S.A. Your name embossed for 75 cents  
additional . . . the year embossed on the  
back for 50 cents additional.

Send personal check or money order to:

**THE JOURNAL OF MEDICAL EDUCATION**

185 North Wabash Avenue, Chicago 1, Illinois

on normal blood pressure values, nowhere does the term standard deviation creep in. Surely modern medical students are tough minded enough to cope with that concept.

Incomplete as modern physiology knowledge must be, certain well developed areas cannot be omitted by any physician who aspires to do his utmost to obtain an insight into the workings of the body, and to make the best application that he can out of available scientific knowledge. Useful as the present text undoubtedly has been, as a first approach to a good deal of conveniently assembled current views, it falls short of what the serious medical student has a right to expect.

Evelyn Howard, Johns Hopkins

#### **Fundamental Considerations in Anesthesia**

Charles L. Burstein, M.D. The Macmillan Company, New York, 1955. 219 pp. with index. \$5.50.

To set down the "fundamentals" of any medical specialty is a large order. To make these "fundamentals" understandable to both medical students and seasoned clinicians alike, is difficult. During the past decade, anesthesiology has become probably the most rapidly growing medical specialty—not only in physiological and pharmacological concepts, but also in physician participation.

In 1949 Doctor Burstein gave to medical students and teachers as well as to "full-time" clinicians the first edition of his "Fundamental Considerations in Anesthesia." All of this in only 147 information-packed pages. Now, only six years later, he has given us his second edition of the "Fundamental Considerations in Anesthesia," in which, in only an additional 67 pages, he has set down the fundamentals of skeletal-muscle relaxants, autonomic-ganglionic blockage, anti-arrhythmic drugs, etc. It is unfortunate that Dr. Burstein did not state more fully the fundamentals of "light plane" anesthesia and the relation of this level of anesthesia to various reflexes; however, this omission is understandable and does not detract from the text.

The author has had a wide experience in clinical anesthesia. When in the course of this experience abnormal reactions have developed, he has investigated these problems in laboratory animals and has presented his findings in this volume or has supplied the information via an excellent bibliography throughout the book.

Anesthesiology is basically the study, understanding and proper handling of many of the reflexes to which, as a result of mechanical, pharmacological or physiological factors, the human body is heir. Dr. Burstein has presented clearly the anatomy and function of the autonomic nervous system as it is related to the circulation, respiration, and gastrointestinal tract. Here, in one small volume, he has described the fundamental principles of clinical anesthesia—a truly concise accomplishment in this field. This book has great value as a text book for the medical students or as reference for the clinician. It exhibits a knowledge of not only of what to do now, but especially of what to do next—the practice of modern anesthesiology.

Richard H. Barrett, Dartmouth

#### **Pathology Seminars**

Edited by Robert S. Haukoil and W. A. D. Anderson. C. V. Mosby Company, St. Louis 1955. 195 pages. \$10.

This well edited, attractively bound and splendidly illustrated little book summarizes the discussion of 62 cases used in five seminars given in recent years at Marquette University School of Medicine. The moderators of the seminars are pathologists outstanding in their fields: Lauren V. Ackerman, Arthur C. Allen, Col. J. E. Ash, Arthur Purdy Stout and Rupert A. Willis. Four of the seminars are confined to miscellaneous tumors, some of which are common and others rare and unusual. The seminar conducted by Col. Ash is restricted to tumors of the nose and throat, and the cases are chosen with the object of stimulating the interest of the general pathologist in this specialized field.

The cases discussed by Dr. Allen are concerned with the pathology of the skin, the only neoplasms considered being the melanomas. Dr. Allen's contribution emphasizes particularly the lesions in which dermatologic diagnosis may be made on histopathologic criteria alone. It includes an interesting and valuable birds-eye view of the general field of pathology of the skin, with particular reference to cooperation between the practicing dermatologist and the dermatologically minded pathologist.

Although some general discussion by other participants is included, the views expressed on controversial subjects are for the most part those of the moderators. This fault, if it be regarded as a fault, is inherent in this type of seminar,

## **MOSBY Titles In Preparation!**

### **Meakins "THE PRACTICE OF MEDICINE"**

No longer is this a one-man book. Instead there are now 22 contributors and collaborators, each handling some phase of the subject for which he is particularly gifted. Through this means the book has been materially strengthened and made more practical. It reflects the best in thought in the various areas of medicine garnered from the widest possible areas of the country.

Those symptoms that bring the patient to the doctor are discussed as to cause and significance. Each of the contributors brings out the physiological approach so that one may deduce what type of anatomic changes have taken place in function.

This new edition is divided into 22 sections, each under one or two associate editors with numerous contributors. The first five sections deal with Bacterial, Viral, Spirochaetal Diseases. There is an entire section on Antibiotics. A large portion of the book covers the Organismal and General

Diseases while the last section is devoted to Psychosomatic Medicine.

The rapid development of chemotherapy and antibiotics has led to considerable confusion in the minds of many. In order to clarify this the section on this subject has been expanded to deal with all aspects of the subject, including indications, specific actions, selection, complications, combinations, and misuse.

Until the last decade or so, a text on the practice of medicine usually included a chapter dealing with psychiatry. More recently this has been reduced in size or has been omitted entirely. In this revision reference to the so-called psychosomatic patterns and psychological aspects has been in each section, where applicable. Finally, the section on "Psychosomatic Medicine" was especially designed to knit the general concepts of this branch of medicine into an integrated whole.

By JONATHAN C. MEAKINS. 6th Ed. 1850 pages, 218 illustrations. Tentative Publication Date May 20, 1956.

### **Sodi-Pallares-Calder "NEW BASES OF ELECTROCARDIOGRAPHY"**

The author has conducted post-graduate courses in South America as well as in the United States and was Assistant, by special invitation, to the Electrocardiography Symposium organized by the A.M.A. in Chicago, in 1952.

It is a book of reference to be used by cardiologists, doctors and students of medicine as well as physiologists and investigators in the field of electrophysiology. The reason for this is that it contains an analysis of the physiological basis for the study of the electrical phenomenon of the heart.

Briefly it covers: a) electrophysiology; b) activation process of the heart; c) clinical application; d) mathematic and electrical basis for the comprehension of the electrical phenomenon of the heart. It has a new approach that consists in discussing first the mathematical and electrophysiological aspects of cardiac activation, and the form the knowledge is applied to in clinical interpretation.

By DR. DEMETRIO SODI-PALLARES. Translation By ROYALL M. CALDER. 820 pages, 520 illustrations. Tentative Publication Date May 1. Tentative Price, \$18.00.

PUBLISHED BY

**THE C. V. MOSBY COMPANY**

**3207 Washington Blvd., St. Louis 3, Missouri**

#### **Roentgen Interpretation, 8th Edition**

Edited by **Holmes and Robbins**, Lea and Febiger, Philadelphia, 1955.

Appearing for the first time at the close of World War I, 24 years after the discovery of x-rays, this familiar and trustworthy friend of practicing radiologists is now offered in its eighth edition, spanning 36 years of continuous popularity. Over the years it has rendered great service to students and practitioners of a constantly expanding medical specialty by making available to all the accumulated experience and wisdom of a truly great American teacher.

New concepts and techniques find well-balanced consideration in the current volume without undue emphasis and without detracting from the sound radiologic philosophy which has been so characteristic of the series since 1919.

Numerous well-chosen illustrations, 371 figures, illuminate the text. If their quality is not uniformly equal to the best achievements of the photoengravers and pressmen employed by publishers who specialize in the production of radiologic books and current articles, it is to be remembered that in this field perfection is most difficult to achieve, particularly in the case of chest films. The very desirable shift from reproduction of roentgenograms in positive to the more comfortable and familiar negative shadow values has greatly added to the engraver's problems. On the whole the graphic portion of the publication, so important in radiologic works, is pleasing and well done.

Taken in its entirety the 1955 model of Roentgen Interpretation amply fulfills advance expectations. Students, teachers and clinical practitioners of radiology will do well to have it conveniently available for daily reference, just as they and their predecessors have done with earlier editions for three and one-half decades.

Fred Jenner Hodges, Michigan

#### **Peptic Ulcer: Diagnosis and Treatment**

**Clifford J. Barborka, M.D.** and **E. Clinton Tetter, Jr., M.D.** Little Brown and Company, Boston, 1955. 209 pp with index. \$7

This book is a short summary of the present status of our knowledge of peptic ulcer. It covers the usual topics, anatomy, physiology, etiology, pathogenesis, symptomatology, diagnosis and management. The text represents a condensation of the authors' thoughts on the various aspects of peptic ulcer. No evidence is given to support the state-

more than  
**42,000,000**  
doses of ACTH  
have been given

**HP\*ACTHAR<sup>®</sup> Gel**

The Armour Laboratories brand of purified  
adrenocorticotrophic hormone - corticotropin (ACTH)

#### *Unsurpassed in safety and efficacy*

In a series of patients treated continuously with Armour ACTH for at least 5½ years¹ . . .

- Each responded with a maintained increase in cortical function
- Major and minor surgical and obstetrical procedures caused no incidents
- Sudden discontinuance of ACTH did not provoke a crisis



...and HP\*ACTHAR Gel should be used routinely to minimize adrenal suppression and atrophy in patients treated with prednisone, prednisolone, hydrocortisone and cortisone.

**HP\*ACTHAR<sup>®</sup> Gel** is the most widely  
used ACTH preparation

\*Highly purified

1. Wolfson, W. Q.: Mississippi Valley M. J. 77: 66, 1955.



**THE ARMOUR LABORATORIES**  
A DIVISION OF ARMOUR AND COMPANY • KANKAKEE, ILLINOIS



ments made and the reader is presented with little data upon which to draw his own conclusions. The text (and reader) suffer from superficiality of analysis. The authors have done the analysis for the reader and present him with opinions which he must accept.

The general approach of the book is that which one uses informing nurses and lay audiences of the facts concerning a disease. For example, directions are given to start patients on a diet, first state ulcer management, containing 2,484 calories and later changed to a second stage diet of 2,870 calories. Although the authors suggest that fewer calories may be desired, the reader is given the kind of dietary edict a patient is given.

On page 208 it is suggested that x-ray examinations can be carried out in the presence of recurrent or prolonged bleeding and can be carried out with little risk of promoting further bleeding. Even though this may be a true statement, the technique of examination and the handling of the patient during the procedure are important. The reader is not forewarned of facts such as these.

In general the book represents to the reader a summary of the peptic ulcer problem and is useful to those desiring such.

W. A. Sodeman, Missouri

#### **Operative Technique in General Surgery**

Edited by **Warren H. Cole, M.D.** Appleton-Century-Crofts, Inc. New York. Second edition, 1955.

In the second edition of "Operative Technique in General Surgery," the editor and the 36 contributing authors have combined to produce an excellent text that is sufficiently illustrated to have some of the attributes of an atlas. The editor, by his own contributions and his wise selection of contributing authors, has composed a book that has no peer in the field of surgical textbooks that deal primarily with surgical technique. As mentioned in the preface, three new chapters have been added which necessitated the transfer to Volume II of the sections on the face, mouth and jaws, surgery of portal hypertension, acute vascular injuries,

traumatic aneurysm and arteriovenous fistula, and varicose veins. However, the addition of the chapters on blood transfusions and allied problems, gastrointestinal surgery in infancy and childhood and the appendix (as a separate chapter) more than make up the loss. This rearrangement is of small consequence since the companion volumes should be considered as one text.

Without attempting to review the text chapter by chapter, or to single out those chapters that this reviewer considers exceptionally good, it can be stated that in each category the author has recognized ability and has presented the subject matter well. In each chapter the fundamental principles underlying the choice of operation are presented as well as the technique of the operative procedure. Sound basic training is essential in the maturation of the surgeon but as pointed out in the introduction by the late Frank H. Lahey, "the proper selection and the proper technical performance of the surgical operation are the final deciding factors in the attempt to cure any surgical lesion by an operation." This premise is admirably carried out in "Operative Technique in General Surgery".

No one should expect to learn surgery solely from a text-book and this is certainly not the intent of the editor. A fine atlas-like text of this type, however, should be thoroughly studied by every surgical resident, especially as a preliminary to his participation in a given surgical operation. Although the technique of this operation may vary in some of the details, the basic principles are uniform and a discussion of various techniques for any given operation is a healthy teaching atmosphere. Provincialism in surgery is, unfortunately, a common occurrence.

Even the "finished" surgeon will profit from study of this text, especially when called upon to perform an unfamiliar operation. As a constant study text for the young surgeon and a reference for the older surgeon, this text and its companion, Volume II, can be recommended without reservation. It should be in every surgeon's library.

C. B. McVay, South Dakota

Streamlines the classic approach to the study

## A TEXTBOOK OF PHARMACOGNOSY

By N. M. FERGUSON

*Dean, College of Pharmacy, University of Houston*

The renewed intensity in the investigation of crude drugs, and their analysis through chromatography, require thinking along the lines of chemical structure rather than in terms of drug identification.

In keeping with modern concepts of teaching the subject, Dr. Ferguson's new text represents the biggest step forward in many years. The biochemical system of classification is used exclusively for the first time.

Scientific curiosity should stimulate both the student and physician to gain some notion of the sources of the medicinals which they employ. A TEXTBOOK OF PHARMACOGNOSY, used as a reference, provides a knowledge of crude drug materials and an understanding of inorganic and organic pharmaceutical chemistry. Up-to-date with the latest revisions of the *United States Pharmacopeia* and the *National Formulary*. 420 pages. \$7.00

How to put drugs to work rationally —

## THE PHARMACOLOGICAL BASIS OF THERAPEUTICS

Edition 2

Louis S. Goodman and Alfred Gilman

The clinical approach offers the student and physician an opportunity to acquire the basic principles necessary for the rational use of drugs in every field of medical practice. Nearly every page reflects the pharmacotherapeutic advances of the past decade.

One of the minor triumphs of the book is the up-to-the-minute bibliography following each chapter. Drugs are grouped on a basis of therapeutic uses. The subject matter is thoroughly indexed with entries for both drugs and diseases. 1,848 pages. \$17.50

at your bookstore or write

*The Macmillan Company*

60 FIFTH AVENUE, NEW YORK 11, N.Y.

# The Personnel Exchange

## Faculty Vacancies

• **NUTRITIONAL BIOCHEMIST:** Assistant professor, teaching of medical and graduate students with excellent opportunity for independent research. Address: Edwin H. Shaw Jr., department of biochemistry, University of South Dakota, Vermillion, S. D.

• **HISTOCHEMIST OR BIOCHEMIST:** Wanted for basic research in department of ophthalmology. We already have a fairly large staff assembled for basic research in eye diseases and can guarantee a stimulating environment. Rank and salary adjusted to fit the individual. Address: Dr. William H. Havener, department of ophthalmology, Ohio State University, Columbus, Ohio.

• **PATHOLOGIST:** Jefferson Medical College, department of obstetrics and gynecology. Position available for competent pathologist desiring full time activity in research in the field of obstetrics and gynecologic pathology. Position includes liaison with department of pathology of the medical college as assistant professor. New laboratories in the process of construction. Moderate salary. Apply to: Dr. Thaddeus L. Montgomery, department of obstetrics and gynecology, Jefferson Medical College, 1025 Walnut St., Philadelphia 7, Pa.

• **RESEARCH FELLOW IN VIROLOGY:** Two-year appointment in midwestern medical center with a well-equipped unit for research on immunogenesis and epidemiology of human and animal diseases. Academic appointment with limited teaching responsibilities. Address: V-38.

• **PSYCHIATRIST:** Assistant professor or associate professor to serve as chief of psychosomatic section. Should be certified in psychiatry or internal medicine and qualified for an academic career. Geographically full-time position with limited private practice. Instructorships are also potentially available in various sections of this expanding department. Address: Merrill T. Eaton, Jr., M.D., Department of Psychiatry, University of Kansas Medical Center, Kansas City, Kansas.

• **GYNCOLOGIST:** Gynecologists whose orientation is toward academic and investigative gynecology are being sought for full time faculty positions in Cancer Institute with a modern 500 bed hospital. An active gynecology service with excellent irradiation and surgical facilities is available. Adequate facilities, personnel and space are available for a research program. Teaching affiliations are with the University of Buffalo Medical School. Address, director, Roswell Park Memorial Institute, Buffalo 3, New York.


• **ASSISTANT PROFESSOR OF PHYSIOLOGY:** The University of Alberta invites applications

for the position of Assistant Professor of Physiology, effective September 1st, 1956, at a salary of \$4,000 per annum (Plus cost-of-living bonus now approximately \$300), with annual increments of \$250. Duties include undergraduate and graduate teaching and a program of research. Preference given to candidates with interest in metabolic or renal physiology and some training in pharmacology. Applications should include a recent photograph or snapshot, a curriculum vitae, and the names of three references. Send to the Dean of Medicine, University of Alberta, Edmonton, Alberta.

• **ASSOCIATE OR ASSISTANT PATHOLOGIST:** To Dr. David R. Manze. Board certified or eligible. Major general hospital, medical school affiliated; active teaching and research institution. Highly qualified staff. Address Albert Einstein Medical Center, Southern Division, Philadelphia 47, Pa.

• **PHARMACOLOGIST:** Full-time position with rank of instructor available July 1, 1956. Doctorate degree required, previous experience in pharmacology teaching and research desirable. To assist in teaching of medical and nursing students only; remaining time free for personal research. Personal laboratory facilities and equipment available. Salary on department budget, minimum \$5000. Reply: Dr. Frank C. Ferguson, Jr., dept. of pharmacology, Albany Medical College, Albany 8, New York.

• **ASSISTANT PROFESSOR OF BACTERIOLOGY:** Initial salary \$5000. Superannuation benefits provided. Duties commence July 1, 1956. Application with details of qualification and experience and names of two referees should be submitted by March 31, 1956 to Dean of Medicine, University of Saskatchewan, Saskatoon, Canada.



**WOODWARD**  
*Medical Personnel Bureau*  
 FORMERLY ARNOLD  
 3rd Floor - 125 N. WABASH - CHICAGO  
 ANN WOODWARD, DIRECTOR

*Founders of the counseling service to the medical profession, serving medicine with distinction over half a century*

**ACADEMIC OPPORTUNITIES IN MEDICINE, SURGERY AND THE SCIENCES**  
 PLEASE SEND FOR OUR ANALYSIS FORM  
 SO WE MAY PREPARE AN INDIVIDUAL SURVEY FOR YOU.

**TO THOSE SEEKING DOCTORS OF MEDICINE AND SCIENTISTS FOR ACADEMIC POSTS PLEASE WRITE US FOR RECOMMENDATIONS OF WELL QUALIFIED MEN AND WOMEN.**

**STRICTLY CONFIDENTIAL**

To aid in solution of the problem of faculty vacancies, MEDICAL EDUCATION will list persons and positions available, as a free service. The school department or person may have the option of being identified in these columns or of being assigned a key number for each position listed. Mail addressed to key numbers will be forwarded to the person or department listing the request.

Information for these columns should reach the Personnel Exchange, Journal of Medical Education, 185 N. Wabash Ave., Chicago 1, Ill., not later than the 10th of the month which precedes the month in which the listings will appear.

• **PEDIATRIC NEUROLOGIST:** The Bowman Gray School of Medicine has a staff appointment for a year or six months in the department of neurology and the department of pediatrics. Applicant should be certified and interested in specializing in neurological disorders of childhood. Address: Richard L. Masland, M.D., Professor of Neurology, Bowman Gray School of Medicine, Winston-Salem, North Carolina.

• **ASSOCIATE OR ASSISTANT PATHOLOGIST:** To Dr. David R. Meranze, Board certified or eligible. Major, general hospital, medical school affiliated; active teaching and research institution. Highly qualified staff. Address: Albert Einstein Medical Center, Southern Division, Philadelphia 47, Pa.

• **TEACHING FELLOW IN OPHTHALMOLOGY:** Position available immediately. Applicant must have completed at least two years of approved residency training and be licensed, or eligible for licensure in Indiana. Salary \$6000. Apply to Fred M. Wilson, M.D., professor of ophthalmology, Indiana University Medical Center, Indianapolis 7, Indiana.

### Personnel Available

• **HOSPITAL MEDICAL DIRECTOR (administrator):** Male, 47, married, M.D.; MPH in hospital administration from Yale. Experience with AMA's Council on Medical Education and Hospitals as member of field staff representing Council and Joint Committee on Accreditation of Hospitals; also assistant director of division of hospitals and graduate education. Seeks administrator position with hospital operating an approved graduate training program for interns and residents. Address: A-191.

• **INTERNIST:** Male, 39, interested in full or part-time medical school affiliation. Has had three year residency at large midwestern medical school. Presently taking one-year period of training in endocrine and metabolic diseases, involving both clinical and research aspects. Address: A-192.

• **MICROBIOLOGIST:** Medical, male, Ph.D., 30. Teaching experience in medical bacteriology, parasitology. Present position, assistant professor of microbiology in medical college. Research experience in immunology, Sigma Xi, publications. Desires teaching appointment with research opportunities in a medical school. Address: A-193.

• **PEDIATRICIAN:** male 46, married. Amer. Board of Pediatrics, masters degree in pathology. Wishes teaching position in medical

school or combined teaching, student health position. College teaching experience, 7 years. Address: A-195.

• **PARASITOLOGIST—PUBLIC HEALTH:** M.Sc., Ph.D., 41, married. Background in medical and zoological parasitology, including medical entomology, in government public health departments, hospitals and university pre-medical and medical school teaching. Societies, publications. Presently a senior parasitologist in a public health department and research associate in a large eastern university medical school. Desires full-time teaching position in a university with opportunity for basic and clinical research, preferably in association with local hospital laboratories. Address: A-196.

• **SURGEON:** S.B. and M.D., University of Chicago. Diplomate, general surgery. Three years experience teaching and research. Current rank associate in surgery. Particularly interested in teaching clinical surgery at undergraduate as well as graduate levels. Age 35. Desires full-time permanent academic appointment in clinical surgery. Address: A-199.

• **INTERNIST, TEACHER, INVESTIGATOR:** Former professor of medicine, qualified internist, member of societies, author, investigator in infectious diseases, much foreign experience, interested in obtaining academic position in clinical medicine with teaching and opportunity for research. Address: A-200.

• **ASSOCIATE PROFESSOR OF RADIOLOGY** at general hospital and university medical school desires position preferably in East. Credentials furnished on request. Address: A-201.

• **GENERAL SURGEON:** Age 39, M.D., C. M.; F.R.C.S. (Edin.); F.R.C.S. (Eng.); American Board eligible with teaching experience in anatomy, pathology and surgery desires full or part-time teaching appointment. Will consider any location. Address: A-203.

• **MICROBIOLOGIST:** Medical, male, Ph.D., 37, married. Experience includes: editorial assistant for scientific journal, industry (chemotherapy and drug resistance), and academic research. Present position research associate in medical school. Research background in antibiotics, drug resistance, chemotherapy, bacterial metabolism, carcinogens, nucleic acids, cytology, and mutations due to irradiation. Well-trained in photography and photomicrography. Desires teaching and/or research. Address: A-205.

• **BIOCHEMIST-INTERNIST:** Ph.D., M.D., 39, desires position combining research, teaching and clinical work. Chief clinical interests are rheumatology and endocrinology; diplomate of the American Board of Nutrition. Industrial research and teaching experience, publications, broad research background including radioisotope techniques. Address A-204.

• **YUGOSLAVIAN DOCTOR:** Married to American citizen, seeks academic position in American medical school. Educated in Budapest, worked in Vienna, 1948-55, chief surgeon of surgical department, City Hospital in Senta, Yugoslavia. Speaks English, French, German, Hungarian and Serbian. Publications. Address A-205.

• **SOCIAL WORK TEACHER** in medical school: Female, married, 8 years teaching experience as faculty member in psychiatric and medical hospitals, wishes position as director of social service and teacher of medical students in the South, Southwest or Southeast. M.A. from U. of Chicago School of Social Service Administration. Available immediately. Address: A-196.

• **INTERNIST:** Board qualified, 38, seeks academic position in department of preventive medicine. Six years experience in full time teaching and research in preventive medicine in medical schools, one year experience in field public health work. Address A-207.

• **PEDIATRICIAN:** 32, formal training Ped. Neurology (one year) and EEG (one year). Dipl. Am. Board Pediatrics; member American EEG Society. Veteran. Desires full or part-time academic position in pediatric department with opportunity to develop child neurology program. Prefers West. Available July 1956. Address A-206.

• **PHYSIOLOGIST-BIOPHYSICIST:** M.D., 35, married, experienced in use of radioisotopes, electronics, desires teaching-research position. Available July 1, 1956. Address: A-206

• **CHEMIST:** Ph.D., 43. Now associate professor of biochemistry in physically and financially cramped medical school. Seeks teaching and/or research position with appropriate remuneration and opportunity for professional growth. Prefer West or Far West. Available September 1956. Address A-209.

• **INTERNIST:** Well-trained; qualified use of radioisotopes. Available September 1956. Desires clinical faculty position on salaried basis, either full-time or part-time with private practice privilege. Military service completed. Age 30; married, with family. Address A-210.

• **INTERNIST-GASTROENTEROLOGIST:** 30. Full-time instructor in medicine with two and one half years of training in gastroenterology in a well-known midwestern university medical school. Special interest in biochemistry and physiology of the digestive tract. Desires relocation in full-time clinical position with opportunity for research and teaching. Address A-211.

• **ANATOMIST:** Ph.D. Male, 26, single. Experienced in teaching, broad academic background. Desires medical school position in teaching and/or research with opportunity to complete work toward MD degree part time. Address A-212.

• **MEDICAL JOURNALIST:** Woman; would like work editing manuscripts and assisting with

the writing of medical publications; have B.J. degree, University of Missouri School of Journalism, 1950; 5 years newspaper experience; 16 hours medical science; employed; available on 2 weeks notice. Address: A-180.

• **ANATOMIST:** Man; D.D.S., 30. Veteran. Experienced in teaching gross anatomy, histology, embryology, neuro anatomy, some pharmacology, in approved medical school. Have completed 3 years of medicine in approved medical school. Desire teaching position with opportunity to complete work for M.D. in return for tuition and stipend. Prefer U.S. or Canadian school but would consider foreign locality. Available immediately. Address: A-213.

• **BIOCHEMIST:** Ph.D., 34, married. Experience in microbial growth factors, isolation of bacterial toxins and animal nutrition. Presently research associate in medical school studying relationship of nutrition to antibody formation. Desire teaching and research in medical school or membership in hospital research team. Address: A-214.

• **PHYSIOLOGIST-PHARMACOLOGIST:** Ph.D. 1953, 37, male, family. Majored in physiology while worked toward Ph.D. degree, taught physiology and pharmacology the last two years as assistant professor. Desire teaching and research or teaching position either in physiology or pharmacology. Available July 1956. Publications. References. Address: A-215.

• **PHARMACOLOGIST:** 33, veteran, Ph.D., with one year post-graduate research stressing localization of site of action of drugs on the central nervous system with well known pharmaceutical company. Desires research preferably in neuropharmacology with or without teaching. Publications. Address A-216.

• **ANATOMIST:** Ph.D. Woman. Seeks academic position. Address: A-217.

• **ZOOLOGIST-CYTOLOGIST:** Ph.D. June 1956. Male, married, no children. Interested in problems of growth and differentiation on the cellular level as studied by cytochemical and classical cytological methods. Experience in cytochemical methods for chromosomes, nucleic acids and basic nucleo-proteins. Desires either an academic post with facilities for research or a straight research position. Address: A-218.

• **PATHOLOGIST:** 33, board certified in pathologic anatomy and clinical pathology. M.D. Illinois, 1945. Experience in diagnostic pathology, experimental pathology, and teaching. Faculty appointment. Publications. Desires position combining hospital pathology with opportunity for teaching and research. Address: G. A. Nedzel, 45 E. Bellevue Place, Chicago 11, Illinois.

• **CHIEFS AND ASSOCIATES:** Department surg., medicine, oto., ortho, oph., path., rad., anes., peds., and obstetrics-gynecology; hospitals serving idus. organ.; preferably those who have served as assoc. professors; one of country's outstanding medical care programs in 3 states with pending medical school affiliations; \$17-\$20,000; annual increases \$1000-\$2000 for 5 years; excellent retirement program; expenses for 3 medical conventions annually. Woodward Medical Bureau, 185 North Wabash, Chicago.

# Individual Membership

in the

## Association of American Medical Colleges

Medical college teachers and administrators, and other persons interested in medical education now have the opportunity to become Individual Members of the Association of American Medical Colleges.

Individual Membership means receiving the *Journal of Medical Education* each month. It means participating in the discussions of the Annual Meeting and receiving the reports of the Teaching Institutes. It means receiving copies of the yearly *Directory*, the *Proceedings* of the Annual Meeting, and other Association publications. And it makes available a valuable, though limited, information service and a personnel exchange service.

Individual Membership, at only \$10 a year, is open to any person who has demonstrated a serious interest in medical education over a period of years. All the privileges of membership and a provisional membership card are granted immediately after payment of the \$10 fee, although confirmation must await official action at the next Annual Meeting.

To obtain membership, fill out the application form below, append check for \$10, and return to the Association's central office at 185 N. Wabash Ave., Chicago 1, Ill.

### INDIVIDUAL MEMBERSHIP APPLICATION

Association of American Medical Colleges  
185 N. Wabash Ave.  
Chicago 1, Ill.

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

(City) (Zone) (State)  
Field of medical education in which chief interest lies \_\_\_\_\_

College or other connection \_\_\_\_\_



**A NEW, COMPREHENSIVE SOURCE OF REFERENCE**

**Color  
Atlas  
of  
Oral  
Pathology**

Prepared under the auspices of the U. S.  
NAVAL DENTAL SCHOOL of the  
NATIONAL NAVAL MEDICAL  
CENTER, Bethesda, Maryland

**This is a magnificent work  
with 461 figures in full color!**

**Reproductions provide excellent  
standards of comparison . . .**

**Aids in the study and interpretation  
of clinical, roentgenographic and  
microscopic findings . . .**

Color Atlas of Oral  
Pathology Includes . . .

ORAL HISTOLOGY AND  
EMBRYOLOGY

DEVELOPMENTAL  
DISTURBANCES

DISEASES OF THE TEETH AND  
SUPPORTING STRUCTURES

DISEASES OF THE ORAL  
MUCOSA AND JAWS

NEOPLASMS

**In the descriptive text opposite the  
color illustrations, the clinical find-  
ings are coordinated with the  
microscopic presentation.**

**160 Text Pages**

**\$12.00**

*461 Full Color Illustrations*

*Available at all regular  
medical bookstores*



**J. B. LIPPINCOTT COMPANY**

East Washington Square, Phila. 5, Pa.